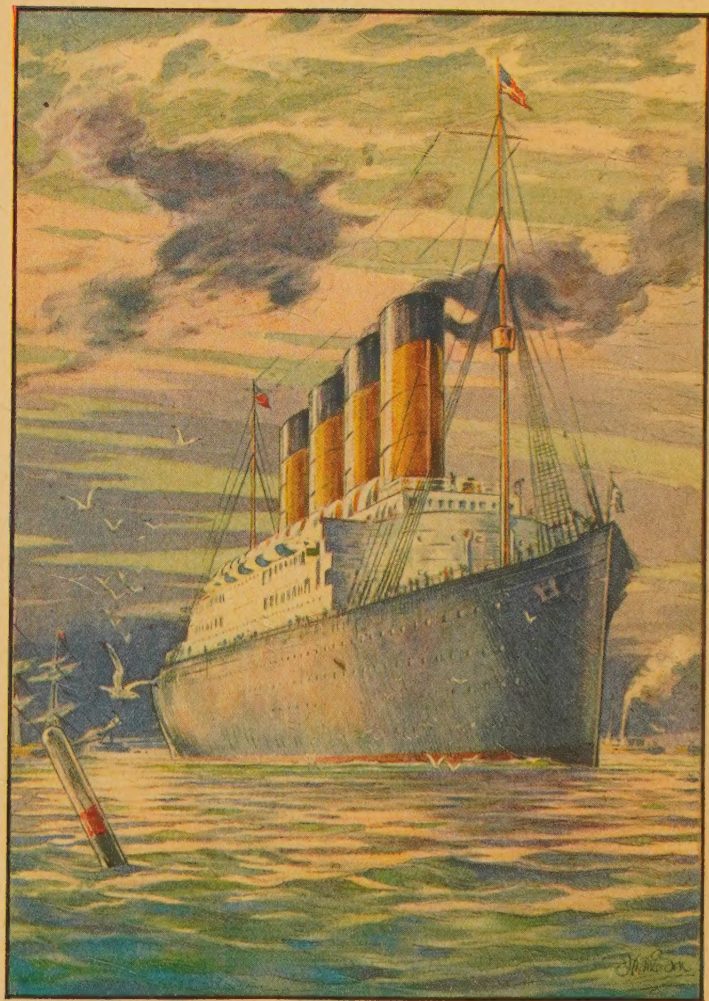


CARPENTER'S NEW GEOGRAPHICAL READER





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CARPENTER'S NEW GEOGRAPHICAL READER

EUROPE

BY

FRANK G. CARPENTER, LITT.D., F.R.G.S.

AUTHOR OF

"AROUND THE WORLD WITH THE CHILDREN" AND

"READERS ON COMMERCE AND INDUSTRY"



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Introduction to Geography

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THE CLOTHES WE WEAR
THE HOUSES WE LIVE IN
OURSELVES AND OUR CITY
THE WAYS WE TRAVEL

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AUSTRALIA, THE PHILIPPINES, AND OTHER
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HOW THE WORLD IS FED
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CARP. NEW EUROPE
E. P. 22

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PREFACE

FOR three decades Carpenter's Geographical Readers have held a large place in the teaching of geography. They have supplied the flesh and blood necessary to clothe the dry bones of the geographic textbooks, and have made the countries and peoples living wholes in the minds of the pupils. Written in the form of personally conducted tours over each continent, the children themselves have traveled with the author by land and sea from country to country and from city to city, visiting the peoples on their farms and in their factories to learn how they live and work, and how each is associated with us and the other nations in the industries and trade of the world.

Carpenter's New Geographical Readers, of which this volume is one, are revisions of the original books, based upon many thousand miles of new travel and research in the countries described. The books have been rewritten in the light of these travels, and in accordance with the economic, industrial, and commercial demands of the present. They have all the features which have made the Carpenter readers so much loved by the children, and added thereto many others which will increase their value as textbooks to be used in connection with any supplementary work in geography.

The value of the changes may be seen by an examination of the present volume. The new "Europe" is equipped with a series of problem and research questions and of proposed journeys, which, worked out in conjunction with the dis-

tance and other tables at the back of the book, will, it is believed, give each pupil a practical grasp of the chief cities and other localities in Europe, as well as a working knowledge of its resources and trade. With the proper use of the book, any child should be able to tell how he can go from the United States by the shortest route to any important city in Europe, and to give an approximate idea of the distance he will travel and how long he will be on the way. He should be able to trace shipments of goods to and from any country on the continent, and also to know the trade routes between Europe and the United States or any other part of the world.

Throughout the new "Europe" the author has kept in mind the relations of each country to the United States and to the world. By constant comparisons with things at home, the pupil is able to visualize things abroad. He learns to study the industries and resources of Europe as related to those of his own country, and also the part that each has in the New World of to-day. He learns the place that the United States now holds in this great world, with which it has recently become so much more closely connected, and in whose political, social, industrial, and commercial relations it now has such an important part.

The book is an American book, written from the American standpoint for the American child, and it cannot but foster and stimulate patriotic Americanism in the minds of the pupils.

The new "Europe" is described as it is now after the World War, with all the mighty changes that war has created. After the war Russia and some other countries were in a very unstable condition. Nearly all European states, however, are now developing according to modern social and business methods.

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On our ship an old "tar" shows us how to tie sailor's knots

EUROPE

I. INTRODUCTION

WE are starting out this morning upon our travels in Europe. Every one who has eyes to read can make the tour if he will only imagine himself to be one of our party. We shall cross the Atlantic on an ocean steamer and move about from country to country and from place to place, now climbing through the snows of the Alps, now sailing by the ruined castles of the Rhine and the Danube, now standing on the North Cape watching the sun shine at midnight over the cold Arctic Ocean, and now going up from the orange and lemon groves of southern Italy to the hot, flaming crater of Vesuvius. We shall explore the natural features of all the great countries, and shall visit their peoples in the cities and villages, on the farms, and in the factories, seeing with our own eyes who they are, how they live, and what they are doing for us and with us in the work of the world.

This is a big undertaking. Europe is the most important of all the grand divisions, although it is by no means the largest. Indeed, it is not one fourth as big as Asia, and if it could be dropped down upon Africa it would cover only one third of that land. It is smaller than any other continent, excepting Australia. It is only a little larger than the United States, but it has about four times as many people, and these people have a greater commerce and a

much higher civilization than the inhabitants of any other country except our own.

But first let us look at the globe to find out, if we can, why Europe has become such an important part of the world. One reason is the place where the continent lies on the earth. It is in the heart of the northern hemisphere. It is in the center of that part of the world which has the most land, and more than seven eighths of the people. Moreover, its shores are washed by the north Atlantic Ocean, and it has easy access by waterways to all other parts of the world.

From the western coast of Europe it is a sea voyage of a week or less to the eastern ports of our continent, and it is only two weeks or a little more to Rio de Janeiro, Buenos Aires, and other great ports of South America. The Panama Canal can be reached in about the same time, and this makes an easy route to all the lands of the Pacific.

By sailing east through the Mediterranean Sea, vessels from Europe can pass through the Suez Canal into the Indian Ocean and thus come to Bombay and Calcutta in India, and go on to China that way. They can steam along the east coast of Africa, and off to Australia and the many island groups of the Pacific and Indian oceans. Indeed, the sea is covered with a network of trade routes whose center is Europe, and thousands of vessels are always moving back and forth connecting that continent with the people of all the countries on earth.

Let us get into an airplane and fly around the coast to see how well Europe is fitted to take advantage of its fortunate location for trading with the rest of the world. We can fly as fast as one hundred miles an hour or even faster. We shall start at Batum (bà-tōom') on the Black Sea, where Europe joins Asia. That sea forms an outlet for the riches

of southeastern Europe. It has good harbors, and it is connected by the Bosphorus and other straits with the Mediterranean Sea. We fly above the Bosphorus, past Constantinople, into the Mediterranean, and wind our way in and out about the coast of southern Europe over the fine harbors of Salonica (sä-lö-nē'kä), Athens, Fiume (fyōō'-mā), Trieste (trē-ěst'), and Venice. We cross the deep Bay of Naples in sight of Vesuvius, and go north to Genoa, Marseille, and Barcelona in Spain. We pass through the Strait of Gibraltar into the Atlantic Ocean, and again turning northward, skirt the Bay of Biscay, taking photographs of the ports of Bordeaux (bôr-dō') and Brest, where many of our soldiers were landed during the World War.

We move through the English Channel into the North Sea, observing the United Kingdom, Belgium, and Holland, with their excellent harbors, and fly above Hamburg in Germany near the mouth of the Elbe. A bit later we are high over the entrance to the Baltic, and we then coast Scandinavia to the North Cape, where we leave the Atlantic and go eastward above the cold Arctic Ocean, passing over Murmansk and Archangel, where some of our troops fought during the World War, and end our journey at the border of Asia.

In this flight about the coast line of Europe with all its windings, we have gone as far as the distance around the world at the equator. We have found good harbors almost everywhere, and there are so many rivers and places where the sea runs into the land that nearly every country is within easy reach by deep waterways.

Again taking our seats in the airplane, we shoot up into the sky. We shall imagine ourselves going so high that with the aid of a powerful telescope we can see the whole continent of Europe at once. It now looks as it does

on the relief map. We see the highlands of Scandinavia at the north, on the edge of the Arctic Ocean, and the huge mountain wall of the Alps and other ranges at the south, with a vast low plain lying between them. It reminds us of our country with its highlands at the east and the west and the Mississippi valley between.

The great plain begins at the foot of the Ural Mountains in Russia and runs southwest to the Bay of Biscay. It includes the most of Russia, Germany, France, Holland, and Belgium, with a part of England across the North Sea at the west. This plain is the bread and meat basket of Europe. It has beds of rich soil, which produce all the grains, fruits, and vegetables of the temperate zone. Its crops are similar to ours, and it has some of the chief wheat lands of the world.

The climate of Europe is much like that of the United States. In the far north we find the cold winters of Alaska; the middle portion is like our northern states, while the three large peninsulas at the south have a climate like southern California. These peninsulas have groves of olives, oranges, and lemons. Their hillsides are covered with vineyards, and in their low valleys the snow seldom falls.

Europe has some of the largest forests of the world. It has water powers and rich beds of coal. It has also iron, zinc, copper, and lead. The iron and coal often lie so near together that manufacturing can be carried on cheaply. These things, aided by the low cost of transportation, have made the Europeans a great manufacturing people.

But there is another reason why Europe has become so important. The most fertile soil, the richest mines, and the best locations for commerce are of little value if they have not the right kind of people to take advantage of

them. The Europeans belong to the most highly civilized of all the world's peoples. They are chiefly of the Caucasian race, which now makes up nine tenths of Europe and is widely spread over the other continents. The race is divided into three branches.

The first of these is the Baltic or Teutonic family, with which we are most closely related. It is composed of the English, the Dutch, the Scandinavians, and the Germans. We shall find these peoples in the northwest around the Baltic Sea and along the Rhine and the Danube and also in the British Isles.

Farther south beyond the high range of mountains, and in France, we shall travel among the Mediterranean or Latin peoples, who form the second branch of the Caucasians. Among the ancestors of this family were the Greeks and Romans, who had the highest civilization of ancient times. To it belong the French, Spanish, Portuguese, Italians, Greeks, and Rumanians.

The third branch of the Caucasian race is the Alpine or Slavic. It is composed of the Russians, Poles, Czechoslovaks, Serbs, Croats, Slovenes, and Bulgarians. These people, for the most part, live in the eastern section of the great lowland plain. They are not as highly civilized as the people of the other two branches, but they are the most numerous of the peoples of Europe.

It seems strange to think of yellow-skinned people as belonging to Europe. Nevertheless, Europe has a few of the Mongolian race, such as the Finns, who live in the country north of the Baltic Sea, the Magyars (mōd'yōrs) of Hungary, the almond-eyed Tatars along the Volga River, and the Turks, who are to be found in Constantinople and in parts of the Balkan peninsula.

We are especially interested in the Caucasian race,



A Teuton



A Slav



A Latin



A Mongolian

Boys of the four chief races of Europe

because it is the one to which we belong. Our ancestors came from Europe, and we are now going to travel in the lands of our forefathers. Many of us have relatives still living in Europe, and during our journey we shall most of the time be visiting children who might be called our cousins.

Locate Europe on the globe. Why has it the best place for world trade? Take sea trips from one of the chief ports of Western Europe to a great port of each of the continents. From a Mediterranean port.

Make a sketch map of the continent, showing what large bodies of water border upon it.

How does Europe compare in size with the other continents? In population? How does it compare with the United States? In climate? What part is like Alaska? What parts like southern California?

Describe Europe from the relief map. Where are the chief mountain ranges? The great plains? The chief peninsulas? Compare the great plain with the Mississippi valley.

Have you ever been in an airplane? How fast can one go? At that rate, how long would it take us to fly around the coast line of Europe? Describe our trip, naming some of the ports over which we pass. Why is such a coast line good for trade?

What are the three chief human families of Europe? To which did your ancestors belong? From what part of Europe did they come?

Name some things that have helped make Europe important.



II. ACROSS THE ATLANTIC TO EUROPE

WE are on a huge ocean steamer moving rapidly over the blue sea from America to Europe. It is now two days since we said good-by to our friends at the wharves of New York, waving our handkerchiefs from the

decks as we steamed down through the harbor. We passed the tall buildings at the lower end of the city, went by the gigantic statue of "Liberty Enlightening the World," and then coasted along Staten Island and on through the Lower Bay. We caught our last sight of land at Sandy



Our route across the Atlantic

Hook, where we dropped our pilot, and sailed forth into the broad Atlantic Ocean.

A day later we were far beyond the coast of the United States and well out at sea. Our first course was towards the northeast, and we are now steaming through the fog that always hangs over the Banks of Newfoundland, and is formed by the meeting of the cold current from the Arctic Ocean and the warm waters of the Gulf Stream. It is pitch dark at night and the fog is so thick that the foghorn sounds every few minutes, reminding us that we are on the most thronged of all ocean highways, where hundreds of steamers are going to and from Europe, and where many fishermen are catching cod. We tremble when we think

that in the fog we might crash into a steamer or run down a fishing smack and kill all the people on it.

We remember also that we are now very near where the *Titanic* struck an iceberg. The *Titanic* was almost as large as the vessel on which we are traveling. She was going full speed, and the ice ripped her steel hull apart as though it were paper. She had several thousand men, women, and children on board. Some of them were saved in lifeboats, but more than fifteen hundred were lost.

When the fog lifts, we have the good luck to see an iceberg. It is a huge white block which has broken off



Icebergs are seldom seen south of the Banks of Newfoundland. Some bergs are a mile long. Six sevenths of a berg is under the sea. How tall are these bergs?

from one of the glaciers of Greenland and is now floating into the warmer seas of the temperate zone. The berg rises about two hundred feet above the sea, most of it being hidden in the water. Its ragged pinnacles are caught by

the sun and sparkle like diamonds. It makes us think of a floating cathedral whose many towers are coated with silver.

The air is now clear and we can see far and wide in every direction. The sea is still high, but the sun catches the whitecaps as the waves race like horses over the ocean. We rush from one side of the deck to the other to watch the smoke of a steamer that appears to be rising out of the water afar off on the right or the left. Now we see a whale spout, and now run to the prow where a school of porpoises is swimming along in front of our vessel.

As we move onward the water grows smoother, the weather is fine, and it is easy to explore the huge steamer on which we are traveling. Our ship is one of the greyhounds of the Atlantic, and it goes so fast that it can cross the Atlantic Ocean from New York to Europe in less than five days. We were amazed at its size when we walked up the gangway at New York and went down one pair of stairs after another to our cabins, the portholes of which are still high above the water. The vessel is nine hundred and fifty feet long, one hundred feet wide, and its height from the keel to the hurricane deck is over one hundred feet. This means that if it could be dropped into one of the wide streets of a city it would fill the street from wall to wall for more than three blocks and reach as high as any eight-story building upon it. It is a great floating shell of steel whose thin walls keep out the ocean.

The ship makes us think of an apartment house, for it has many rooms and it rises in stories. It has elevators from one floor to another, and we can go up and down stairs holding on to the balustrade as in our own houses at home. It has dining rooms, each as big as the largest schoolroom, and parlors that can seat fifty or more. It

has hundreds of cabins, each accommodating two or three of our party. The cabins are small, and the beds are built one over the other against the wall at the back. Each



Cross section of our ship. It is moved by four screw propellers. The cargo is in the first four stories and our cabin in the seventh.

The passengers number 2500

cabin has a porthole, through which we can look out at the ocean. The portholes are opened when the weather is fine, but when a storm comes they are closed by disks

of plate glass as thick as your thumb. The waves dash against the glass, but it is fitted so tightly that the water cannot come in. There are electric lights which we can turn on and off, and in each room is a washstand with hot and cold water and a mirror above it.

Our steamer has many decks running around it, story above story, and on the top deck are lifeboats enough to hold all the people on board. Here is a conservatory with a glass roof above it. It is heated by steam, and we sit in it under the shade of real flowers away out here in the midst of the ocean.

On the same deck is a gymnasium with exercising machines worked by electricity. There is a wooden horse which the electric current moves up and down just like a real horse. We climb on the leather saddle and put our feet into the stirrups. We then press a button and the horse starts off on the trot or the gallop. There is also a camel, to which the electricity gives a swinging motion like that of the "ship of the desert." We pretend we are on real camels and belong to a caravan crossing the Sahara. The ship has also a swimming pool filled with salt water pumped in from the ocean.

During the trip we learn all we can about the great vessel. We go on the bridge with the captain and watch the man at the wheel as he steers the steamer. We spend some time in the engine rooms looking at the mighty turbines which move the propellers at the stern to force the ship through the water. We visit the wireless telegraph room on the top deck to send messages home to our friends. The operator keeps in touch with both Europe and America and gives us the important news of the world every morning.

On one day we are taken down into the hold and shown the vast cargo of goods which is going from our country

to Europe. We visit the kitchens and bakeries and are amazed at the huge quantities of food needed to supply the passengers. The head steward tells us that he has in his cold storage rooms many tons of fresh meat, and that for a single voyage he takes more than forty thousand eggs, twenty-five thousand pounds of fresh vegetables, hundreds of barrels of flour, and eight thousand pounds of fresh fish, lobster, and oysters. We have several thousand people on board, and the ocean air is so bracing that one seems to be always hungry. We enjoy every meal and the lunches between times.

We watch the run of the steamer and try to guess how fast we are going. The latitude and longitude are posted as soon as the officers have learned by the sun what they are, and from them we can tell just how many miles we are making. We grow excited one day when a sailor tells us we are at that moment less than three miles from land. We rush to the rail, but there is nothing but water in sight. We are really in the midst of the ocean. The sailor laughs as he says that the nearest land is right under the ship. It is the bed of the ocean, which in mid-Atlantic is less than three miles or just about thirteen thousand feet deep.

As we travel onward we grow more and more interested in this vast body of water that covers about three fourths of the earth. The ocean is one continuous sea, and the Atlantic, which is only one of the five parts of it, is the long channel that lies between North America and South America and Europe and Africa, extending from Greenland at the north to the Antarctic Ocean at the south. It is thirteen thousand miles long and has an average width of three thousand miles.

The Atlantic is the most traveled of all the oceans and it has many routes from the Old World to the New. We

might have gone from New York north to Canada and crossed to Ireland in a little more than four days, or we could have taken the southern route from New York to Gibraltar and reached the Mediterranean Sea within a day or so more. In that trip we should have crossed the route that Columbus took when he discovered America. His trip over the Atlantic was from Palos (pā'lōs) in Spain to the West Indies. It took him thirty-three days, but he



There are games upon deck

went first to the Canary Islands and then sailed west. This northern route is more traveled than any other. The distance from New York to Queenstown, or Cobh, as Queenstown has been named by the Irish, is twenty-eight hundred miles. Our steamer goes so fast that we need only five days to reach Ireland.

The time flies and the days are too short for us to learn all we should like to know. We talk with the officers and sailors and make trips here and there over the vessel. We have games upon deck. We play ship golf, shovel board,

and deck quoits, and take a ride in the gymnasium and a swim every morning. We are surprised when the green rocky shores of Ireland come into view, and a little later we find our ship dropping anchor in the harbor of Cobh, with all Europe lying before us.

Trace our route across the Atlantic on the map. How long does it take us to go from New York to Cobh? How far is it? How long did it take Columbus to cross the ocean? Trace his route from Spain to the West Indies.

Where are the Banks of Newfoundland? Tell all you can about icebergs. What is the difference between an iceberg and a glacier?

Describe our steamer, and our life on the ocean.

Compare the Atlantic Ocean in size with the Pacific; the Indian Ocean; the Arctic; the Antarctic; which is the most traveled? the deepest? How long is the Atlantic Ocean? What is its average width?

Trace on the map the route from New York to Gibraltar. How far is it? How long would a voyage by that route take?



III. IN IRELAND

WE take our waterproofs and umbrellas with us as we land. The sun is shining, but Ireland is one of the rainiest countries of Europe and no one knows when the weather may change. The Irish Free State, and the United Kingdom, which consists of England, Scotland, Wales, and Northern Ireland, are noted for their dampness, Ireland so much so that the people have a saying: "In England it rains all day, in Scotland it rains all night, but in Ireland it rains both day and night."

It is not so bad as that, for there are many fine days. But the air is always moist, for the country lies where the water-laden winds from the Atlantic Ocean blow over it. They strike the mountains which border the greater part



of the coast, and give the island a plentiful rainfall. The winds are warmed by the ocean, and this makes the climate much milder than that of New England, which is farther south. The summers are cool and the winters are almost as warm as those of California.

It is the moisture in the air that makes Ireland so green. From the steamer the hills seemed like those of Ohio in June, and here in Cobh the foliage is fresh and there are luxuriant flowers in the gardens about the white houses rising in terraces on the hills around the harbor. We do not wonder that the country is called the Emerald Isle.

Ireland is about the same size as Maine, and it is somewhat like it in character. It has mountains and plains with many lakes, swamps, and morasses. It is shaped like a great basin; the mountains that run around the coast form the rim and within them is the low central plain which has scarcely a hill from Dublin to Galway. In some other parts of the plain there are low hills here and there, but most of it is level, with large pasture lands and now and then one of the peat bogs for which Ireland is famous.

The chief river of Ireland is the Shannon, which drains a large part of the central plain. It is the longest river in the British Isles. It is navigable to the heart of the plain, from which two canals connect it with Dublin, making a waterway from one side of Ireland to the other.

But look at that crowd of rosy-cheeked, roughly clad men who stand on the wharves cracking their whips, awaiting our landing. They are the jaunting car drivers, the jolly cabmen of Ireland. Their faces shine with good nature, and each has a good word for himself as he asks us "if we will be having a ride through the town behind his iligint steed in a car."

We bargain with the men to take us to the city of Cork twelve miles away. The jaunting cars are two-wheeled affairs, with seats high up over the wheels and steps below on which our feet rest. We sit in couples, back to back, facing the fields as we ride. We have to hold on tightly at every turn of a corner. The load must be carefully balanced, and when there are less than two or four passen-



One of our jaunting cars from Cobh to Cork

gers the driver sits at the side instead of the front. We soon get used to the car, and then the ride is delightful.

Queenstown, or Cobh, is on an island in Cork Bay, one of the largest and best harbors of the British Isles. We ride over bridges to the mainland and are soon in the country. The roads are smooth and much of our way is under wide-spreading trees. We pass through fields divided by green hedges or stone walls covered with earth upon which

the grass grows. There are primroses at the foot of the walls, and daisies, cowslips, and buttercups sprinkle the pastures. Furze bushes with their golden yellow blossoms are to be seen on the hillsides and we shall find great beds of heather on some of the mountains.

The land is rolling. Here is a meadow in which fat cattle are grazing, and on the other side of that hedge is a large flock of sheep. Here the men are clipping the grass with scythes, and in a field farther on they are hoeing rows of dark green plants that form wide ribbons on the black soil. Those are potatoes, a crop important to Ireland, for it forms a large part of the food of the people.

Where are the barns? We see none to speak of. Much of the grass is fed green or stored in stacks after being made into hay. Now we pass a white cottage with a garden behind it and a hedge of red flowers cutting it off from the road. The home is small but it seems comfortable. It is the home of a well-to-do tenant farmer.

We next go by a park of huge oaks and tall elms with an ivy-grown porter's lodge by the side of the gate leading into it. A mansion shines out through the trees beyond, and our driver tells us that it once belonged to a rich lord whose chief home was in England. He says the lord owned here an estate of thousands of acres which he rented out in small farms to the people. Farther on we pass other large estates, all of which were once owned by Englishmen.

This was formerly the condition of a large part of Ireland. Long ago when the English conquered the country they gave much of the land in large tracts to Englishmen who did not live in Ireland. Some of the estates passed into the hands of small holders who lived on them, but others were kept as a whole by the descendants of the men to whom they were granted. In several cases one man owned a whole



town, all the houses and lands belonging to him were rented out by his agents to the people. Such rents were sent off to England and the money was all spent outside Ireland. The rent of many of the small farms went the same way. This was not good for the country. There were a hundred thousand holdings of less than one acre, and about half that number of between one and five acres in size. These conditions have been greatly changed within recent years, and the Irish farmer is now able to buy and cultivate his own land.

The central plain of Ireland is one of the most fertile parts of the British Isles. It is underlaid by limestone much like the blue-grass region of Kentucky, which is among the richest parts of our country. Moreover, the glaciers as they swept over the land have carried this limestone to other parts of the island and made them rich. The country is noted for its luxuriant grass, the greater part of it being in pasture land and feeding hundreds of thousands of horses, cattle, and sheep. Ireland has so much stock that if it were divided equally among the people each family would have five cows, four sheep, one pig, and twenty-six chickens, ducks, or geese. We shall see fine horses everywhere, and in the western part of the island we may do some of our traveling on ponies. The ponies of Galway are as hardy as those of the Shetlands.

The soil of Ireland is fertile. The country is small, but it produces more than one third of the meat imported by England, and also millions of bushels of oats, barley, and wheat. The grass is sweet, and the cows give rich cream, which is made into butter for export. The climate seems just right for hardy vegetables such as turnips and cabbages, and there is no place where the potato thrives better.

The potato might be called the bread food of the Irish. It is raised everywhere, and in good seasons the crop

amounts to many millions of bushels. This vegetable was not known in Europe until after the discovery of America. It originated in South America on the slopes of the Andes, whence it was brought to Virginia. During the days of

Queen Elizabeth it was taken from Virginia to Ireland and grew so well there that it has come to be known as the Irish potato.

The potato is so necessary to Ireland that when the crop fails it often causes a famine. In 1846 the crop was destroyed by a blight, and during that year hundreds of thousands died of starvation and many left Ireland for the United States. Some Irish people had come to



Where we travel in Ireland

our country before that time, but that was the beginning of a great migration which continued for many years and has given us millions of excellent citizens.

We shall see the homes of the farmers as we travel through Ireland. Some of them are small, containing no more than two or three rooms. They are roofed with straw thatch, but being built of stone seem more substantial than the small dwelling houses of the United States. Others are

quite large and compare favorably with the best homes of our farmers. They have lawns and gardens about them, and there are barns and other buildings near by.

Notice the children. Many of them are bareheaded and barefooted, but their cheeks are rosy with health. They go to school during a part of the year like the children of our country districts. At other times the boys work on the farms and tend the stock. They watch the sheep, and as we ride through the country we shall see them running this way and that to keep the sheep from straying. Now and then one puts his hand to his mouth and calls out to a friend who has his flock on an opposite hill, and now one shouts "Halloo" to us as we pass.

The houses grow larger as we come nearer Cork, a thriving city of many fine buildings at the head of Cork Bay. It is the metropolis of southern Ireland, and the chief port for this part of the country. It ships large quantities of meat, live stock, and butter to England. The Cork butter is famous; it is prepared without salt and is so sweet that we can eat it like cheese.

We walk down St. Patrick Street, stopping a moment at the great cathedral and going into several fine stores to see how the Irish do business. We stroll along under the wide-spreading elms of the Mardyke, the chief promenade of the city, and later take jaunting cars for the groves of Blarney Castle, five miles away.

Blarney Castle was built by Cormac McCarthy more than forty years before Columbus discovered America. It was besieged by Oliver Cromwell and almost destroyed by King William III, so that now all that is left is the donjon tower. This is in good preservation, although the ivy has grown into the crevices and about the top.

We climb up inside the tower, and look down out of one

of the windows at the famed Blarney Stone set into the wall below. If we could kiss this stone the guide tells us it would give us such wheedling tongues that no one could resist us thereafter.

Like a magnet its influence such is,
Attraction it gives all it touches;
If you kiss it, they say, from that blessed day,
You may kiss whom you please with your Blarney.

Leaving the castle, we wander awhile through the groves of Blarney and then take the railroad through southern Ireland to Bantry Bay, whence we go by automobile over the mountains to Killarney. Our ride is through one of the poorest parts of the island. The soil of the mountains is thin and the rainfall is heavy. The country is rocky and wild, and it grows more and more charming as we near the Lakes of Killarney. Here the mountains are higher; seen from the lakes they tower up like a huge wall.

The lakes are three in number, consisting of an upper, middle, and lower. The lower lake, which is about as large as the two upper ones, was formed by the moraine of a glacier. The lakes have numerous islands; and their scenery, including the purple mountains covered with woods, the silvery water, and the evergreen shores, is wonderfully beautiful. We stroll here and there about the lakes and row over them in boats from island to island.



IV. THE IRISH FREE STATE — DUBLIN

A SHORT motor-car ride from Killarney carries us northward to Limerick, the chief seaport for the western part of the great central plain. The town is situated on the Shannon about fifty-six miles from the ocean,

and it has also connection with Dublin and Belfast by the Shannon and several canals. It exports oats, bacon, fish, condensed milk, and butter, and manufactures lace and fishhooks, some of which we buy to take home.



Loading peat for winter fuel. The peat has come from the bog in the rear now filled with water

Our next trip is across the plain to the city of Dublin. Our automobiles take us for a long distance up the brown river, Shannon whose waters are discolored by the many bogs or great swamps with which they are connected. We have to go out of our way to pass around the bogs,



Sackville (O'Connell) Street is one of the principal thoroughfares of Dublin

and stop here and there to watch men and women cutting out peat.

Peat is a spongy vegetable matter which might be called half-grown coal. It is the dead moss and plants that have grown in the bogs and have lain there for ages. In some places the peat is almost as hard as coal and in others soft with many little fibers matted together. Some of the peat beds are thin; others are thirty or forty feet thick. When a bog is drained the wet peat is cut out and dried for fuel. It is sometimes pressed into bricks for burning, and it is employed also for making gas.

Ireland has but little coal, and its chief fuel is peat. It makes a hot fire although it does not blaze like soft coal or wood. It smolders away, giving out a pale blue smoke and brightening to a glow under a draft. We see women carrying great baskets of this fuel home on their backs, and now and then stop and talk with the men getting out the peat. They tell us there is rich soil below and that when the peat is removed and the bogs drained it makes excellent farms.

We are delighted with Dublin. It is about as large as Indianapolis and is one of the most beautiful cities in Europe. It is situated near the Wicklow Mountains at the southern end of a rich plain and at the mouth of the river Liffey where it flows into the Irish Sea. The river divides the city into two equal parts, and its lower course is bordered with granite quays. The town has also large inclosed docks, in connection with the canals across Ireland.

Dublin commands the shortest sea route to England, and from it all parts of Ireland can be easily reached by water or rail. Among the manufactures of the region is a dress goods of silk and wool. This is Irish poplin. It is almost as beautiful as silk and will wear twice as long.

Dublin is the capital of the Irish Free State, being the home of the Governor General appointed by the King to represent the British government here. It is the chief social center of the country. It has magnificent houses, libraries, and schools.

We visit the stores on Grafton Street and buy some poplin and a handkerchief or so of Irish lace to take home to our friends. The lace is made by hand, stitch by stitch, on cushions by the women and girls in their homes. It takes a long time to make a handkerchief, and a girl may work many weeks on a lace curtain.

Leaving the stores, we visit the Bank of Ireland, more than a hundred years old, and then go to the castle where the Governor General lives. We photograph the statues of Tom Moore, the poet, and of the Duke of Wellington, both natives of Dublin; and then stroll through the grounds of Trinity College, meeting many students in black caps and gowns and remembering that Oliver Goldsmith, the author of "The Vicar of Wakefield," and Dean Swift, who wrote "Gulliver's Travels," once studied here.

During our stay we call at the town hall, where we meet the mayor. He tells us that the city owns the docks, wharves, and markets, and the waterworks and electric lighting plant. It maintains a museum, as well as zoölogical gardens, an art gallery, and a model school.



V. NORTHERN IRELAND — BELFAST AND THE GIANT'S CAUSEWAY

WE might cross the Irish Sea from Dublin and be in England within a few hours, but we wish to see something of Northern Ireland before visiting Great

Britain. The chief manufacturing part of the country is in the northeast. The ports there are near some of the rich coal and iron mines of England and Scotland, and they give easy water transportation to many markets. On this account there has grown up a large industry in ship-building and the making of machinery. The chief port is Belfast, situated on the River Lagan not far from the North Channel. It has one of the great shipyards of the world and it makes many large steamers which ply between Europe and the United States.

The moist climate and excellent water of Northern Ireland are especially fitted for fine linens and all weaving industries. The flax plant, from whose fibers we get linen, grows well there, and we shall see many fields of flax as we ride through the country. When ripe the plants are pulled from the ground, laid out on the moist grass, and sprinkled with water to rot off the bark. After that the long fibers within are taken out to be combed and prepared for spinning and weaving. When woven, the cloth is wet and bleached in the sun. The Irish linens have a whiteness and beauty that can be found nowhere else.

During our stay in Belfast we visit a linen mill said to be the largest in the world. Its buildings cover acres, and more than twenty-five thousand people are engaged here in turning the long, strong fibers into cloth. We go through room after room filled with men, women, and children hard at work at the looms. Most of the women and children are barefooted, but they look healthy and happy. They are weaving tablecloths and napkins and lawns for dress goods and handkerchiefs of all degrees of fineness. Thousands of the collars and shirtwaists worn in America come from these very factories. The manager tells us that until about one hundred years ago Irish linens were all



These women are working on linen. Ireland makes the finest linen of the world

made by hand, but now machinery does almost everything, although some of the tablecloths are still woven upon hand looms.

Before leaving Belfast for Scotland we take a short run along the coast of Northern Ireland to Portrush, the station for the Giant's Causeway. This consists of many acres of huge stone columns rising out of the sea as though they were piles driven down by the giants. They are so close together that we can walk upon them. Our guide tells us that there are forty thousand in all, but we do not stop to count.

The columns are of many different shapes and heights. Some are triangular, some pentagonal, and others octagonal. Some rise in tiers like so many steps; others remind us of the pipes of an organ, while one formation is like a great pulpit.

We walk about on the stones and make photographs of them. We lean over the columns which surround a great hole called the Giant's Well and look down into the water. As we do so an old Irishwoman hobbles up and offers us a bottle, telling us that if we take some water from the well and drink it, making a wish as we swallow, our wish will come true before the year closes. We laugh and give the old woman a penny but decline to tempt the fates in that way.

After a time we hire a boat to get a view of the Causeway from the sea. The columns extend far out, gradually losing themselves in the water. As we are rowed about, our boatman tells us how the Causeway was built. It was because of a quarrel between Fin McCoul, the champion giant of Ireland, and one of the champion giants of Scotland. According to the story, the Scotch giant dared all the world to come on and fight him. He had heard of Fin,

and he sent a message saying that if it were not for getting wet he would cross over to Ireland and give him a drubbing. Upon hearing this, Fin applied to his king and with his permission built this great stone bridge from Ireland to Scotland in order that the Scotch giant might come over dryshod. The boastful Scotchman did come, and Fin gave him a whipping and sent him back home. After this



The Giant's Causeway rising out of the sea

there was no further need of the Causeway and it was thrown into the sea.

The Causeway was really made by a stream of lava which flowed, ages ago, from a volcano, and in cooling split into many-sided columns.

Using the route map, describe your trip through Ireland.

With which of the United States does Ireland compare in size and surface?

Locate the chief ports and describe them. What are the principal exports?

What is peat? What is the difference between peat and coal?

What important vegetable does Ireland owe to America? Where did it originate? (See Carpenter's "South America.")

Describe your trip through Dublin; through Belfast.

Where is the chief manufacturing region of Ireland? Why? Why is Ireland fitted for weaving linens? What are the chief flax countries? (See Carpenter's "How the World is Clothed," page 50.) For what do we raise flax? Trace a cargo of flax fiber from Petrograd to Belfast.



VI. GLASGOW AND THE CLYDE

WE have left Belfast and steamed across the North Channel and up the Clyde River to Glasgow. We are now in the lowlands of Scotland, which form the central part of the country. If you will double up your hand in the shape of a cup you will have a rough example of how the land lies. There are highlands at the north, corresponding to the fingers. There are uplands at the south like the hand near the wrist, and there is a basin of lowlands, the district where we now are, represented by the palm. The crust of the earth in the middle of the country has been broken across, and the block between two cracks has dropped down.

The lowland district contains more than half the people. It has all the large cities and is spotted with villages. It is gridironed with railroads and it has several rivers. On the east is the Firth of Forth and the fine harbor of Leith, and on the west is the Firth of Clyde with the wonderful harbor of Glasgow. The lowlands have many farms and they are so underlaid with coal and iron that they have become one of the chief manufacturing places of the globe. Their

coal fields are among the richest of the British Isles, and millions of tons of coal are taken out of them every year. The country is dotted with factories and foundries. Some towns are noted for making cottons, others for woollens,

and some, like Dundee, are devoted to linen and jute. We find that this part of Scotland has industries of almost every description, including shipbuilding, steel works, machinery, and hardware. Glass-making and paper-making are also carried on, and there are factories for the making of starch, matches, pottery, and rubber goods.

We see the smoke of Glasgow for hours before we come to it. We steam among ships from all parts



Outline of our travels in Scotland

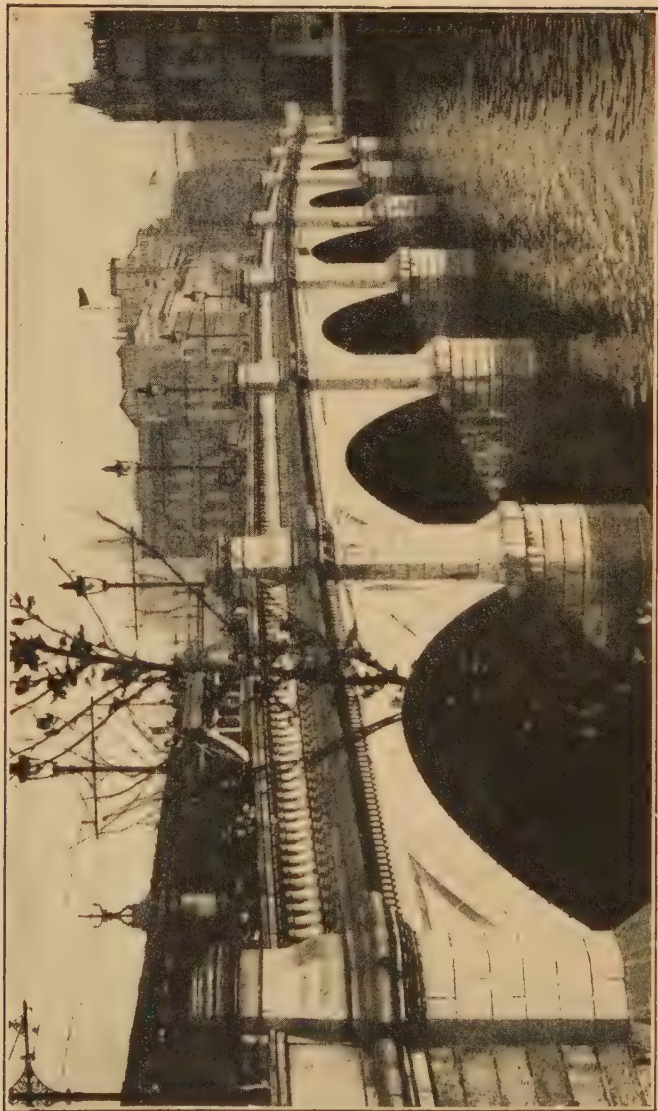
of the world in entering the Firth, and our voyage up the Clyde is through the chief shipbuilding center of the world. The Clyde is a narrow stream, but its banks are lined with the skeletons of ocean steamers in the process of making, and we are almost deafened by the noise of the thousands of hammers fastening cold steel together with red-hot rivets. The shipbuilding yards are right out in the

fields. They remind us of the yards near Philadelphia on the Delaware River, which is sometimes called the American Clyde. The crops are growing near and about the works, and as we stand on the deck of our steamer we look down upon cozy farms and see the cattle grazing, undisturbed by the din. Nearer Glasgow the Clyde grows narrower, and as we sail on into the heart of the city it is a canal with long lines of ships at the banks.

The people of Glasgow are proud of the Clyde. It is due to them that it has become navigable out to the sea and thus has aided in making Glasgow the manufacturing center of Scotland. Next to London, it is the largest city of Great Britain.

There was a town a few miles from the mouth of the Clyde more than seven hundred years before Columbus discovered America, but the stream was so shallow that no ship could come to it, and much of the land about consisted of marsh overflowed at high tide. For many hundreds of years thereafter sea-going vessels came only to Greenock, at the mouth of the river, and for a long time it was thought that Greenock would be the chief town of the Scottish lowlands. Then the people of Glasgow determined to have a port of their own. They began to deepen the Clyde, and about fifty years before we declared our independence of England a vessel of sixty tons was able to sail from Glasgow directly to New York. Later, the channel was further improved and now large steamers can come right into the heart of the city, and men-of-war a hundred times as large as that sixty-ton vessel are being built in its suburbs.

We are told that the Clyde was the first European river to be navigated regularly by steam vessels. The little *Comet*, which drew only four feet of water, made voyages



Bridge across the Clyde, in Glasgow

upon it in 1812, and six years later a line of steamships connected Glasgow with Ireland. The first steamboat that ever carried passengers was the *Clermont*, which had a steam engine invented by Robert Fulton, an American. It was making daily trips up the Hudson between New York and Albany in 1807, or five years before the time of the *Comet*.

We are interested to know that the United States had much to do with the making of Glasgow. After the Clyde was deepened a thriving trade with the colonies of Virginia and Maryland sprang up. The chief article sold was tobacco, which was sent from the plantations directly to Glasgow for all parts of Great Britain. The business was profitable, and many of the Scotch fortunes of to-day were founded upon it. Later the abundant coal and iron near by caused the building of all sorts of factories, and shiploads of our cotton were sent here to be made into cloth.

Glasgow has magnificent buildings of sandstone, granite, and marble from the quarries of Scotland. Its streets are wide and well-paved, and crowded with people. We take a walk down Argyle Street, and are surprised at the traffic. It is as great as that of lower Broadway, and we are jostled by the jam of motor-trucks, wagons, cars, and automobiles. We find it almost as bad in the shopping section of Buchanan Street. Here costly goods of all kinds are displayed in the windows. The people we meet are well-dressed, and we see there must be plenty of money in Scotland. The Scotch are noted for their thrift. They are industrious and saving.

But let us take a car and ride through the city. We ask the conductor the fare. He tells us it is only a ha'penny, or one cent of our money, and we learn that Glasgow has

about the cheapest carfares in the world. He says this is because the city owns the tramways and manages them for the people, and tells us it is the same with the ferries, gas plants, waterworks, and even the concert halls. The city government builds houses which are let to workingmen at low rents; it has lodgings where the poor can stay for less than ten cents a night, and public baths where the charge is four cents a swim, with lower rates for school-children. It has public washhouses where for a few cents an hour a woman can have the use of a stall with hot and cold water, and there are hot-air chambers to dry the washing, so that she can take it home with her ready for ironing.

Glasgow has excellent schools. Nearly all of the Scotch can read and write and almost every family tries to send its children to college. There are great universities in Glasgow and Edinburgh, and academies in many small cities. We visit the University of Glasgow, which stands on a hill high above the Clyde, and climb to the top of its tower for the view. We are now three hundred feet above the city, which fills the valley of the Clyde for miles. We can see the river extending on and on, lined with factories and foundries and shipyards almost to the sea. About the city are scores of tall, round stacks, each pouring forth a volume of smoke into the low-hanging clouds, while on the chimneys of the houses are hundreds of queer little pots about a foot long and six to eight inches wide. They look like mammoth combs growing up from the bricks. They are white tiles placed on the tops of the chimneys to keep them from smoking.

Notice that great building just below with the cemetery rising in terraces behind it. It is the Glasgow Cathedral, where John Knox once preached; and there in the business part of the city is George Square, with the statue of a kind-

faced man in a shepherd's plaid in the center. That statue represents Sir Walter Scott, who wrote "Ivanhoe," "Rob Roy," and the rest of the Waverley novels. The bronze figure near by is that of James Watt, who in 1763 invented the steam engine. Both of these men were natives of Scotland.

We go out from Glasgow to visit the weaving mills in the country near by. In Paisley, a few miles away, we see thousands of men, women, and children turning our raw cotton into the thread used for sewing. In other mills they are weaving linens and silks, and in others plaids, tartans, and shawls. In the Tweed valley we visit woolen factories where they are making the Scotch tweeds and cheviots which our tailors import for fine clothing. The term "tweed" comes from the Tweed valley, and "cheviot" is the name of the wool cut from sheep that graze on the Cheviot Hills.



VII. THE SCOTTISH HIGHLANDS — EDINBURGH

My heart's in the Highlands, my heart is not here;
 My heart's in the Highlands, a-chasing the deer;
 A-chasing the wild deer and following the roe,
 My heart's in the Highlands wherever I go.

WE shall take our guns with us this morning. We are going into the Highlands and may have an invitation to hunt on one of the big estates. In the past, northern Scotland was owned by the Highlanders, a brave, hardy people who lived chiefly by hunting and rearing cattle and sheep. They had many clans or tribes, each made up of the descendants of one family, and they worked, hunted,

and fought together. The chiefs of the clans had castles and each maintained a court of his own. Later the chiefs sold their lands to rich strangers, who come here during a part of the year to shoot game. The demand for such



Highlanders of the regiment band. They have bagpipes under their arms

sport is so great that the country has been allowed to grow wild to supply it. Millions of acres are devoted to hunting and fishing, and hills and valleys upon which hundreds of cattle and sheep once fed are now given over to the pheasants and grouse. There are deer parks of thousands

of acres, and great forests in which all but the owners are forbidden to go and where a Highlander would be arrested if he killed a deer or snared a bird or a rabbit. There are more than four thousand shooting grounds, and it is said that seventy men own about half of the Highlands.

As we go from Glasgow to Edinburgh through the gorge of the Trossachs, we skirt the edge of the Highlands, seeing many men with dogs and guns hunting grouse as we ride in stages over the moors. We sail across Loch Lomond and Loch Katrine through the scenes described in Scott's "The Lady of the Lake."

The Trossachs are wonderfully beautiful. The moorlands are covered with heather, low bushes which look like sprigs of dark green pine, and which, with their little rose-colored blossoms, coat the low hills and sides of the mountains with masses of dark green and rose.

We stop at Stirling to see the castle where Mary Stuart was crowned Queen of Scots and afterward visit the castle at Edinburgh where her son, James VI of Scotland, afterward James I of England, was born. Edinburgh Castle stands on a rock three hundred and fifty feet above the level of the sea. History tells us of the terrible time Queen Mary had here and how she finally fled to England, where she was imprisoned by her cousin, Queen Elizabeth, and at last sent to the block. Mary was the last ruler of Scotland as a separate nation. Her son James became king of both England and Scotland, which have since been united.

The Scotch Highlanders are now among the best soldiers of the United Kingdom, and they fought bravely in the World War. We see some of them playing on bagpipes when we visit the castle in Edinburgh. They are dressed in the old Highland costume, and at first we hardly know whether they are women or men. They have plaid



Edinburgh Castle, where Mary, Queen of Scots, lived, and James VI of England was born

shawls, and kilted skirts of bright colors falling from the waist to the knee. Their knees are bare and it is several inches below the knees that the plaid stockings begin. Each man has a fur pouch at his belt. Some have a knife in the top of one stocking. We now and then see a boy wearing this costume, although most of the children dress as we do.

We are delighted with Edinburgh. It is a beautiful city noted as a center of culture, and sometimes called the Athens of the United Kingdom. It publishes more books than any other British city except London.

We are in Edinburgh on Sunday. How quiet it is! The cars are not running and the streets are almost deserted. The Scotch keep the Sabbath more strictly than any other people of Europe. They go to church or remain quietly in their homes. It is hard to get a motor-car for a ride in the parks.

We go to the cathedral where John Knox preached, and walk down High Street to visit the old stone house where he lived. Knox was a religious reformer who did much to make the world better. Over the door of his house we read these words carved in stone: "Love God above all and your neighbor as yourself."

Have you ever heard of the great bridge which crosses the Firth of Forth near Edinburgh? It is the mechanical wonder of Scotland. It is more massive than any bridge we have in America, an enormous structure of stone and steel more than a mile and a half long built upon three piers with spans high over the water.

From Edinburgh we make a trip to Ayr, near which Robert Burns, the most famous poet of Scotland, was born. The train takes us through rich fields separated by green hedges and moss-grown walls. The crops are luxuriant

and the lowlands have excellent farms. There are many small farmhouses with stables hard by, but no great barns to speak of.

Robert Burns was a farmer who plowed the fields much as that farmer is plowing them over there at the side of the road. Many of Burns' poems relate to country life.



Robert Burns was born here, January 25, 1759

We visit the cottage in which he was born at Alloway, a few miles from Ayr. It is a stone hut with a roof of thatched straw. The door is low and we pass in through a turnstile, paying a penny to enter. The floor is of stone, and the iron crane which held the kettle still hangs over the fire. Leaving the cottage, we visit the ruins of Alloway kirk and walk along the banks of the Doon, and

then, after a lunch at Tam O'Shanter's Inn, go back to Edinburgh.

Another day is spent at Abbotsford, the home of Sir Walter Scott. The house is much like a castle. It is a grand stone structure on the banks of the Tweed, with large windows giving magnificent views. We walk through the library where the famous Waverley novels were written and admire the collection of weapons, including Rob Roy's gun and a pistol that once belonged to Napoleon Bonaparte. Afterward we visit Melrose Abbey, considered the finest ruin in Scotland, and the Abbey of Dryburgh, where Scott is buried, and then take the train south for England.

Where are the chief manufacturing districts of Scotland, and why? Mention the principal products.

With what American city does Glasgow compare? What is its principal industry? Give some of the reasons for its growth and importance. How was it helped by American tobacco? How far is it from Glasgow to New York?

Describe Edinburgh, and your trips to the homes of Burns and Scott. What famous inventor was born near Glasgow?

Tell the story of Queen Mary and Queen Elizabeth.



VIII. RURAL ENGLAND

WE have crossed the Cheviot Hills and passed over the border of Scotland into "merrie old England." How fresh the air is and how luxuriant the crops! The country is like a garden, and the banks on both sides of the railroad are velvety green.

We have seats in one of the little compartments into which the English cars are divided. The doors are in the side instead of at the end. The conductor stands on the foot-



Typical English farm country

board outside as he asks for our tickets. Now he has shut the door and gone on to the next compartment. The door is locked and the car is moving at forty miles an hour, and we wonder what we would do if a crazy man were with us. Fortunately, we have the room to ourselves and feel comparatively safe.

We find that on every train there are two classes of cars, and that some trains have three. The cars of the first class are fine, and those of the second and third are almost as comfortable; as they are much cheaper, we frequently travel third class. Indeed it is a common saying in England that only princes and fools travel first class.

The English railroads are excellent. There is a network of tracks covering the country. There are so many that if they were joined end to end they would reach almost around the world. The roadbeds are smooth, and the stations are of stone with solid stone platforms. Every station has a garden about it, and the grass is kept like a beautiful lawn.

We notice the farms as we go. The fields are divided by green hedges. There is a flock of fat sheep in that meadow at the right, and farther on are some beautiful cattle. England has such fine cattle, horses, and sheep that we import many of these animals for breeding purposes. The country is famous for its delicious mutton, and there is no meat better than "the roast beef of old England." The principal crops are wheat, barley, oats, hay, and fruit. Milk is the chief dairy product, most of the butter coming from abroad.

There is a man riding a plow to which two horses are harnessed, and in the next field a gasoline tractor is dragging the shares through the soil. The English use mowers, reapers, and threshing machines. They are excellent farmers and have good farming tools.

We see many of the farmhouses as we ride by on the railroad. Each has a barn and sheds and haystacks about it. The barns are broader and lower than ours, and many of them are roofed with straw thatch. They are used chiefly for stables and granaries. The hay and straw are "ricked," or stacked up out of doors, the tops of the ricks being thatched or covered with canvas. How old everything is! The moss is growing on the roofs of the sheds, and the side of that farmhouse is covered with ivy. Many of the hedges which fence the fields were planted a generation ago, and the country roads were almost as good when the only roads in America were Indian trails.

Now we get an outlook over a valley through which a stream flows. The stream is lined with wide-branching trees and crossed here and there by bridges made of heavy stones closely fitted together and now half covered with moss. The bridges, like everything else, are substantial, for the English believe in doing things well, and they say that the best is the cheapest. We see this in their houses and in all public improvements.

Now look again over the valley. The fields have little paths through them, for the people usually cut across lots to visit their neighbors. We see many of them strolling through the green meadows. The English are great walkers. The ordinary boy or girl thinks nothing of a five-mile tramp through the country. They are fond of outdoor sports. We see many tennis courts and golf grounds and now and then fly by a crowd of boys playing cricket, the English national game.

But what is the huge stone building that rises like a fortification upon that hill in the distance? That is the ruins of an old English castle, like Kenilworth and others of which we have read. It was built during the Middle

Ages as the home of a knight or baron and his retainers. If we should enter it we should find narrow stone stairs leading to rooms lighted by slits in the walls or by small barred windows, and heated by great fireplaces. Even the best rooms are gloomy and dreary. The American workman of to-day has more comforts than the nobles had in the past, even though they owned all the land they could see from the tops of their castles.

Most of England is still in the hands of a few people. We see the homes of many of the rich landowners as we ride through the country. There is one rising out of that grove just beyond us. It is a great mansion, shut off from the road by high walls and surrounded by a beautiful park. It has large gardens and hothouses and a velvety lawn. Its owner has a score or more servants, and he may own many farms which he rents out to his tenants. There are such estates in all parts of England. They are usually inherited by the oldest son, and are kept in the same family from generation to generation. The English aristocracy has been, for many generations, based on the ownership of land, and every noble family has its country seat which is its principal home.

But here we are at a village where we shall stop over night. The houses are substantial. Many of them are old and some are covered with vines. Their walls are thick, and their roofs are of slate, tile, or thatch, often extending far out over the walls. Most of the houses have gardens about them. They have rose bushes and other plants, reminding us of our front yards at home.

That house on the corner, with the sign, "The King's Arms," over the door, is the public house, or hotel, and that little building farther on with the tower is the school.

See that man with the white smock over his clothes.

He is a carter and is bringing a load of grain to the railroad. His cart is bigger than any used in our country. Its wheels are broader and it will carry more than our common farm wagon. The four horses are hitched tandem; their harness is heavy and each has a bell fastened to his collar, which jingles merrily as he tramps along.

At one time the farms of England were more important than her factories. The people raised not only all their own food, but were able to export wheat and meat to other lands. It is different to-day. The most of the English people are engaged in manufacturing, and they have so increased in number that if all the soil were cultivated it could not supply them with enough to eat for one month. The result is that most of the food is brought in from abroad. Steamships loaded with grain, flour, and meat are daily leaving our seaports for the United Kingdom, and great quantities of food are imported also from Canada, Australia, eastern South America, and Asia, as well as from the other countries of Europe. The United Kingdom is now spending several million dollars a day for the food it buys of other countries, and there are about ten persons in the factories to every one on a farm.

This dependence upon outside nations for food is a serious matter. In the World War the people of England at times could get so little food that each person was permitted to buy only so much bread, meat, and sugar per day. For this reason, the United Kingdom keeps a large navy to protect the routes over which her food comes. The government is trying also to have the people raise more food at home. During the World War many of the great estates were divided and sold on easy terms to the former tenants. So much new soil is being cultivated that millions of acres have been added to the well-tilled farms.

IX. MANUFACTURING ENGLAND

TO-DAY we are traveling southward through some of the chief industrial districts, passing through cities half hidden in smoke. The farms are still large, but the landscape is dotted with groves of smokestacks much as the country districts of our eastern states are dotted with trees. The smoking groves mark the sites of manufacturing villages.

We are now in a region where the whole country is one vast workshop. We ride by mines where sooty-faced men are getting coal and iron out of the earth. We pass long trains of iron ore and piles of slag, the refuse of the blast furnaces which are turning the ore into pig iron and steel. See how the huge chimneys are pouring out fire and smoke into the sky! The din of the machinery from the ugly many-windowed factories almost drowns the noise of our train.

How dirty everything is! The air is full of soot. We look with disgust at our soiled collars and cuffs, and each wonders whether his face can be as dirty as that of his neighbor. England has many regions like this. It is one of the chief steel manufacturing centers of the world, and it makes more things out of metals of one kind or another than any other country of Europe. It manufactures so much cloth that if all the cotton, woolens, and linens turned out in one year were joined together they would carpet an automobile road so long that it would reach round the world, and leave enough over to cover a similar road from San Francisco to Boston.

Moreover, most of the raw cotton used by the United Kingdom comes from the United States, most of the wool

is brought across the oceans from Argentina and Australia, and the bulk of the flax is from Russia. A large part of the copper, zinc, and lead employed in British manufacturing comes from our country, and raw materials of other kinds are brought in from everywhere to be made into the many articles that England exports to all parts of the world.

But how has this little island become such an important manufacturing country? We shall see some of the reasons as we travel over it from port to port and from one busy district to another. In the first place, the United Kingdom is in almost the center of the land hemisphere, and its water communications are such that it can easily reach every part of the globe. A group of islands with excellent harbors, it lies, as it were, in the front door yard of Europe, where about one fourth of all the human race live, and it therefore has many people to buy all it makes to sell.

There is no place in England that is more than seventy miles from the sea, and its surface is such that railroads and canals connect all parts of it with the ports, so that the goods can easily be taken from place to place and out to the ocean for shipment abroad.

The United Kingdom has six great coal fields and many industrial centers. There are beds of iron ore and limestone not far from the coal so that it has the most favorable conditions for the making of steel. This, in connection with the many fine harbors, forms the foundation of Great Britain's manufacturing industry.

We have seen something of the coal fields in the lowlands of Scotland. We shall now pass through the Northumberland coal district, which lies a little south of the border on both sides of the Tyne River, giving the mines easy access to the ocean. Here is one of the largest coal deposits

of Great Britain, with rich beds of iron near by. We stop at Newcastle-on-Tyne, and watch the steamers loading coal for export, and then wander about the noisy shipbuilding yards, which are almost as large as those of the Clyde.

A little farther south we enter the coal fields of York-

shire. It is still smoky, but we forget the dirt as we go from town to town and from factory to factory.

We visit the lace works of Nottingham, spend

some time in Bradford to watch the making of

worsted, and then go on to Leeds to see the

woolen mills and the sales in the cloth halls on market days. Leeds

is the center of the woolen industry. As we

walk through its factories, we are told that England employs a vast

number of people in making cloth, and that it

gathers its wool from Australia, Argentina,

and almost every other sheep- and goat-raising country on earth. It manufactures more cotton goods than any

other nation, and its raw cotton comes from the United States, Egypt, and India. It makes silks and velvets out

of the raw silk of Japan, China, and southern Europe, and it ships some of the goods it produces from these raw

materials back to the very places from which they came.



Coal fields of Great Britain (shaded)

At Dewsbury, near Leeds, we visit one of the chief blanket factories, and our guide informs us that the first blanket ever made was woven here by Thomas Blanket in 1340. He says that from this man's name came the word "blanket." We are too polite to deny this, although we know "blanket" is from an old French word for white cloth.

Do you want a good pocket knife? Some of the best in the world are made in this Yorkshire coal district. The center of the cutlery manufacture is at Sheffield, a smoky city in the hills at the junction of several streams with the Don. It has hundreds of factories and the huge chimneys, which rise through the smoke that hangs over it like the ghosts of a dead forest, reach far above the spires of the churches. Sheffield is noted all over the world for its knives, razors, scissors, and all kinds of fine tools. Much of the work is still done by hand, and we shall see hundreds of blacksmiths pounding out knives and razor blades upon anvils in much the same way as iron is shaped in our blacksmiths' shops.

A knife is a little thing, but it may give us a lesson in geography. Here is a box of samples showing the kinds of knives made. Open one of them and draw the edge of the blade across your thumb nail. It is as sharp as a razor. It is of steel made of iron from Sweden. The ore was dug from the mines and the iron sent across the North Sea to England that the workmen might make the best steel.

Now look at some of the other parts of the knife and ask each of them from where it has traveled in coming to Sheffield. The town makes one think of Cinderella, for she sits in the ashes of her coal pits and prays to her fairy god-mother, Commerce, who straightway waves her wand and performs her miracles of modern industry. She raises her

hand and the miners of Sweden dig out the ore. She moves it again and the metals in those brass rivets start from their homes in the Andes or in the western United States and make haste toward Sheffield. Again, and the nickel which plates the ends of the handle comes across the ocean from Canada, while the silver in the name plate crawls forth



Making cutlery in Sheffield

from the Andes or Rockies and starts on its way over land and sea to these shops in England.

Observe now the variety of materials in other knives and wonder at the story each handle could tell of its travels! Here is one made of ivory from the tusk of an elephant killed by half-naked savages in the wilds of Central Africa. The knife lying beside it has a handle from the horn of a rein-

deer that perhaps dragged the sleds of our fur-clad Eskimos over the snows of Alaska, while that tiny penknife near by has a handle whose opalescent shell was part of the house of a pearl oyster in the tropical waters of our Philippine Islands. There are handles of brown shell from the backs of tortoises which not long ago were crawling along the banks of the Amazon, and others made from the horns of buffaloes that waded through the mud on the plains of the Ganges. That white-handled table knife is bound with plates of vegetable ivory grown on the palm trees of South America, and the others in the next case are handles which were once the bones of wild bulls that galloped over our western plains with cowboys behind them. The manager tells us that that kind of bone is known to the trade as Boston bone. We think it should rather be named after Chicago, Kansas City, Fort Worth, or Omaha, for in those cities most of our cattle are killed for shipment to Europe.

We next visit Birmingham in the Black Country of England, where there are other rich beds of iron and coal. The town is situated where was once Sherwood Forest, in which the adventures of Robin Hood and his Merry Men were laid. This forest extended through many of the midland counties, and long before it was known that coal could be used to smelt iron, charcoal was made from the trees and employed for iron working. At that time every house was a little factory, having its own blacksmith shop in which the whole family labored. Even the women and children pounded out nails, chains, and other small articles. Later, coal was dug from the mines near by, and Birmingham came to be one of the chief iron-making centers of the world. Its people were already skilled in the handling of tools, and they soon learned to make things by machinery.

At the present time there are few places on earth that compare with Birmingham in their manufactures of brass, iron, and steel. Pittsburgh, Pennsylvania, perhaps comes the nearest. Birmingham has all sorts of foundries and factories for heavy machinery, steam engines, steel plates, and steel rails. It makes motor-cars and trucks, thousands of motor-cycles and sewing machines, and also innumerable buttons, jewelry, and other articles of every description. It turns out millions of steel pens every year, and tens of millions of screws and nails. It makes so many pins and needles in one month that if you should sit down and try to count them you could hardly finish the job in your lifetime. It has been called the toy shop of Europe, and as we go through the factories we see thousands at work on toy engines, toy automobiles, railroad trains and tracks, and the countless mechanical and electrical toys sold to the children of England and other parts of the world.

From the Black Country we take a run through the beautiful mountains of Wales, where there are other large coal fields, and also deposits of iron, copper, tin, zinc, and lead. The coal fields of Wales yield about one fifth of all the coal produced in Great Britain, and have made Cardiff, on the Bristol Channel, the chief coal-exporting port of the world.

From Bristol we go north to Manchester, situated in the Lancashire coal fields, to see the great mills fed by the cotton plantations of our southern states. The climate of the United Kingdom is such that it cannot raise cotton, but the moist air of this region is so well fitted for spinning and weaving that cotton manufacturing has become about the most important of all British industries, and we shall find that Lancashire has many thousands of looms, with millions of spindles at work. Before taking a closer look



Our main line of travel through England and Wales

into a cotton mill, let us notice from the above map that the country is covered with a network of railways and public roads, and we may make excursions from this route in motorcycles and automobiles.

A spindle is the whirling rod upon which the cotton lint is wound after it is twisted into thread. It is like a great spool. It is the unit of cotton weaving, and the size of a mill is known by the number of spindles it contains. In all the cotton mills of the world there are about one hundred and fifty million spindles. Two thirds of these are in Europe, and about one half of all those in Europe are found here in Lancashire. As we grow almost two thirds of the raw cotton used by the world, we can see how important this place is to us.

We pass through many mill towns as we come near Manchester, and by hundreds of villages in which spinning, dyeing, and weaving go on. The streams are so discolored by the dyes that they seem to flow ink. In the town of Oldham there is one point from which we can count six hundred factory chimneys. We visit Preston, where Arkwright, the inventor, started his first mill to weave cotton by machinery, and at Blackburn, nine miles away, we see where Hargreaves set up the first "spinning-jenny." Both places are still making cotton, calico, and muslin; and at Bolton, where Crompton invented the spinning-mule, there are enormous cotton mills and dye-works.

Manchester is the fourth city of England in size, and it is the chief cotton manufacturing town of the world, and its cotton industry has been greatly increased by the ship canal which runs from here out to the sea. For a long time all the raw cotton used in the Manchester factories was landed at Liverpool and brought by rail from there to this city. Now the steamers bring their cotton to the very doors of the mills. They thus have cheap water transportation all the way from Galveston and New Orleans for their American supplies, and from Alexandria and Bombay for their cotton from Egypt and India. Indeed, the

rate of ocean freights is so low that they can get raw cotton about as cheaply as some of our interior cities to which the cotton must be taken by rail.

The Manchester Ship Canal is not nearly so wide, nor so long, nor so deep as the Panama Canal, and it has cost much less than the barge canal from New York to Buffalo.



The Manchester Ship Canal

It is only thirty-five miles long, one hundred and twenty feet wide, and twenty-eight feet deep; but the Manchester people believe that it is one of the wonders of the world, and they say it is making Manchester a great ocean port.

We take a trip on the canal, seeing cotton mills on both banks all the way down. We pass many ships bringing in cotton, and see other vessels loaded with manufactured goods going downstream, and we have company all the

way until we enter the Mersey and come to anchor at Liverpool in one of the largest and most important commercial ports of the world.

Liverpool has more commerce than any other port of the United Kingdom. This is due to its trade with the United States. Next to New York it is the busiest port in the world. We land at the magnificent stone docks which wall the banks of the Mersey for miles, and look longingly at the huge steamers from New York that are unloading meat, wheat, and other American products and taking on English manufactured goods to carry back home. See that ocean greyhound about to start out. We might go on board and within less than a week be back in dear old America! We hesitate only a moment, however, and then turn our eyes toward the vessels from Germany, France, Scandinavia, Russia, and the Mediterranean ports, remembering the many strange countries of Europe we have yet to see.

We stroll about the docks. Many of them surround deep pools into which the ships are admitted through water-gates like the locks of a canal. It is often difficult to unload in the harbor on account of the great rise and fall of the tide, but the water in these pools is like a mill pond. Other ships use floating landing-stages, which rise and fall as the tide comes in and goes out.

We soon leave the wharves for a trip through the city. We visit the custom house, the town hall, and stock exchange, and then take a train for Stratford-on-Avon to spend a day at the birthplace of Shakespeare. We stop there over night at the old Red Horse Inn where Washington Irving lived when he was in Stratford, and next morning go to the house in which Shakespeare was born, the school-room where he was taught, and the church where he is



Landing stage at Liverpool. It is about a half mile long and eighty feet wide

buried. The great poet lies under the floor below a marble slab, upon which are cut these words :

Good friend, for Jesus sake forbear
To digg ye dust enclosed heare ;
Bleste be ye man yt spares thes stones
And curst be he yt moves my bones.

Leaving Stratford, we drive to the ruins of the fine old castle of Kenilworth, only a few miles away, and wander about through the scenes of Walter Scott's famous romance of that name. Thence we walk across country to Coventry, noted for its manufactures of watches, motor-cars, bicycles, and ribbons. From there we go by train to visit the ancient universities of Oxford and Cambridge, where the highest education of England is given. Each university consists of a large collection of colleges, each college having its own students and its own professors and lecturers.

The students live in the colleges, and as we stroll about through one old building after another, we walk in the footsteps of the men most famous in English history. We are especially interested in Oxford because about one hundred American students are always kept at school there, their expenses being paid through scholarships supported by the estate of Cecil Rhodes, an Oxford graduate, who made a great fortune in Africa. In his will he left a sum of money to educate at Oxford a certain number of young men from different nations outside England, with the idea that by associating together, the future great men of these countries would be better prepared to be of service to the world.

The American students take us from college to college. In Christ Church they show us the portrait of Lewis Carroll,



Warwick Castle, beautifully located on the banks of the Avon River

who wrote "Alice in Wonderland," and in Oriel the room where Thomas Hughes, the author of "Tom Brown's School-days," lived while at school. In another place we see the desk on which Samuel Johnson penned his first English dictionary, and stop awhile before the portrait of Doctor Fell, of whom was written the verse :

I do not like thee, Doctor Fell,
The reason why I cannot tell;
But this one thing I know full well,
I do not like thee, Doctor Fell.

There are a half dozen other great universities in England, and several in Scotland and Ireland. There are public and private schools of one kind or another in every part of the United Kingdom. The English rank among the best educated peoples of the world, and have always stood for the highest ideals of our civilization.



X. LONDON

WE have come by express train from Cambridge to London. The great city vies with New York as the largest of the world. But London was founded almost two thousand years ago, and New York less than four hundred. Greater New York is now about as large as London and it will soon be ahead of it in importance. London is bigger than any two capitals of continental Europe, and it has so many people that it forms a little world of its own. Most of its citizens are Englishmen, yet it has more Scotchmen than Edinburgh, more Irishmen than Dublin, and more Jews than the Holy Land. It has a vast number of French, Germans, Italians, Russians,



Piccadilly, in the fine shopping center

and Poles, and many thousand Americans. It grows so fast that a new house is begun every hour, a baby is born every six minutes, and enough people to make a large city are added each year.

London has been described as an enormous beehive of humanity. It is a sea of stone, bricks, and mortar, so large that if we should climb to the top of the monument in the center of the chief business section and look over the city, the houses would reach to the horizon and we could not see it all. It has thousands of factories which cause dense clouds of smoke to hang over it, and the Thames River, which flows through it, often sends up fogs so thick that the people can hardly see their way through the streets. These fogs have a yellowish tint, and one seems to be looking through spectacles of amber. At night they are so heavy that it is almost impossible to go about in an automobile, and at high noon the sun appears to be a red ball.

How long do you think it would take us to explore London on foot? A week? More than that. A month? More than that. Perhaps a year? More than that. If we should walk all day and night, not stopping a minute, we could not go through all its streets in a year. Indeed, the main highways, if placed end to end, would reach across Europe, making a paved road walled with houses all the way through France, Switzerland, Austria, Hungary, Serbia, and Bulgaria, and on to Constantinople.

We might learn something of London and why it has become a great city by a trip down the Thames. It lies on both sides of the river about sixty miles from the ocean, and the waters are so deep that the ocean steamers can go in and out with the tides. There was a settlement here at the time of the Romans, who had ferries over the Thames ;

and hundreds of years later, when the river was bridged, the place formed a natural outlet for the rich Thames valley and the country beyond. Ships could bring goods thus far up the valley and they were then sent inland in every direction over the roads. As time went on railways and canals were built out from London, and it now forms the best port for bringing in many classes of goods and one of the best places for exporting to all parts of the world. The city itself contains about one sixth of all the people of the United Kingdom. It does more manufacturing than any other city of the world, with the exception, perhaps, of New York.

We are fortunate in having good weather during our travels. The Thames is glistening like diamonds under the rays of the sun, and the buildings look less somber than they did last night in the fog. We leave our hotel in Trafalgar Square near the tall granite column with the bronze statue of Admiral Nelson on top, and walk down to Charing Cross, where we get a motor-bus from the Strand to London Bridge. This will take us through the very center of business London.

How narrow and crowded the streets are! From morning till night they are so thronged that there is no room for car lines except underground, and the people ride chiefly in cabs and motor-cars and busses. We take our seats on the top of a motor-bus, and as we ride we are high above the crowds that are hurrying in every direction, while a tangle of traffic fills the streets as far as we can see. The buildings around us are dingy and old. There are no large office structures like our "sky-scrapers," and were it not for the traffic and the dense throng we could not believe we are in one of the world's chief business centers.

Now we have left the Strand and are passing through

Fleet Street by the great publishing houses. See the boys and girls coming out with bundles of newspapers under their arms! The girls are bareheaded and they cry out the papers quite as loudly as the boys. It is here that the chief London dailies are printed. A little farther on is St. Paul's Cathedral. We look up. Its towers kiss the sky. It is one of the many fine old cathedrals of England, and is the largest and most magnificent of Protestant churches. Listen! It is twelve o'clock and the great bell is striking the hour. The bell of St. Paul's is tolled only when one of the royal family of England dies, but it strikes the hours and its rich mellow tones can be heard throughout the vast city.

Leaving St. Paul's, we ride on through Cheapside and Poultry to Lombard Street, where we get down and stroll through alleys walled with banks and business houses. We are now in the financial center of London. We walk through Cornhill and Threadneedle Street, seeing banking signs everywhere. The buildings are substantial but not like the huge structures of financial New York. We see many well-dressed men about the stock exchange, and realize that this is one of the chief money markets of the world. Railroads in South America, diamond mines in Africa, silk mills in China, sugar plantations in Cuba, sheep farms in Australia, and rubber groves in Malaysia, as well as gold, silver, copper, and iron mines everywhere, are operated with capital supplied by this part of London. The buildings of the small section known as "The City" are filled with offices and workshops employing over one million human beings. They are occupied only by day. At night they are deserted by all but the caretakers and the police, for the people have gone to their homes in other parts of the city.



St. Paul's Cathedral, the third largest church in the world

But what is that huge gray stone structure which looks like a prison? It covers eight acres, and is the biggest building in this part of London. There is a man at the door wearing a scarlet gown and a velvet cocked hat. He has a staff in his hand, and we wonder if he may not be some money king and that staff be his scepter. He is only a guard, and the building is the Bank of England, famous throughout the world. It has charge of the government funds, and its private business is such that it has a half billion dollars worth of gold in its vaults.

Quitting the bank, we cross over to the Mansion House, where the Lord Mayor lives, remembering the tale of Dick Whittington and his famous cat that formed the foundation of his fortune and at last made him mayor of London.

We next visit the Tower of London, which for many years was the prison and place of execution for traitors and criminals. A guard in gorgeous uniform shows us around. We then take the subway to London Bridge to see the shipping and traffic of that part of the city. The subways of London are underground railways similar to those of New York. They are called tubes, and are really great tunnels dug out under the houses and streets, in which fast express trains fly to and fro far below the gas pipes and sewers. A trip costs "tuppence," or only four cents, and the cars carry hundreds of millions of passengers each year. They connect with all the railway stations, and with the eight thousand trains which arrive and depart from London each day.



The guard who shows us around the Tower

XI. COMMERCIAL ENGLAND — THE COLONIAL EMPIRE

FROM London Bridge, which crosses the Thames at the lower end of "The City," we can get some idea of the commerce and business of the United Kingdom and especially London. This bridge is thronged from daylight to dark, and more than twenty thousand vehicles cross it each day. Standing in its center and looking down the Thames, we can see a forest of masts extending on and on until they are lost in the horizon. The river for miles is lined with wharves, and there are so many vessels that we can hardly make out the houses behind them. Huge inclosed docks have been excavated a short distance back from the river, with which they are connected by deep channels. These docks are entered by locks, and the ships lie there at anchor undisturbed by the tides.

A large part of the commerce of London consists of imports, most of the food being brought in from abroad. We go to the grain and provision docks to see how Dame Commerce is kept busy bringing food for the gigantic stomach of this mighty city. Here they are taking off frozen sheep from New Zealand, and there discharging the cargoes of chilled beef that have come across the ocean from Argentina and from the United States in cold storage chambers. London eats so much beef every year that the cattle required to supply it, if driven in single file, would reach from New York far beyond Omaha. The city consumes so much mutton that vast factories in far-away lands are kept busy freezing sheep for its markets, and so much fish that hundreds of vessels are needed to bring in the supply for one day.

The bananas of London come from the West Indies and Central America; vegetables are brought from Belgium, Holland, and France, and from as far away as Spain and the Canary Islands. The city imports apples from our country and South Africa and from distant Tasmania. Cheese in vast quantities comes from Switzerland, Italy, France, Holland, and even from Canada and the United States. The people of Denmark would suffer were it not for the money they receive for the butter that spreads London's bread, and the farmers of Belgium and northern France get much of their income by supplying London with poultry and eggs.

Similar conditions prevail in all the other large cities and manufacturing centers of the United Kingdom. Great Britain has many ports. We have already seen the harbors of Glasgow, Liverpool, and London. Southampton has a large trade with the United States, the continent, and other parts of the world. Cardiff and Bristol and Newcastle-on-Tyne are coal ports, and Dover is the principal port for passenger travel to France. Ships are always unloading quantities of food and raw materials to be used in the factories. The country is dependent on outside countries for many of these things, and also for markets for what it makes to sell. A land like this must have a great foreign commerce, and for this reason we find the United Kingdom doing business with all parts of the world.

For much the same reason the British have built up a huge colonial empire. The United Kingdom has colonies and dependencies in different parts of the globe which have more than one hundred times as much land as there is in Great Britain and Northern Ireland, and which have one hundred times as many people. The United Kingdom and these colonies comprise the British Empire, which, when the

World War began, included one fifth of all the land on the globe and had as its inhabitants more than one fifth of the whole human race. The Empire is even greater to-day, for new countries were added at the close of the War.

Indeed, we might start here at London and travel around the world, touching only at British ports. We could cross the Atlantic Ocean to Montreal, and go thence by railway through British North America, which is larger than the United States, to Vancouver, and there take ships that would land us in Hongkong, an English island near the coast of South China. From Hongkong we could steam on to Singapore, another British possession at the end of southeastern Asia, and thence go northward up the Bay of Bengal to Calcutta, the capital of British India, a country half as large as ours, with more than three times our population. There is a railroad from Calcutta to Bombay, from which ships steam over the Indian Ocean to Aden, a British colony in southern Arabia, and thence on through the Red Sea to the Suez Canal, controlled by the British. Passing through the canal, Egypt, another British protectorate, would be on our left; and in crossing the Mediterranean Sea we might call at the British Island of Malta and go out into the Atlantic under the British fortifications on the Rock of Gibraltar and thence northward to Liverpool.

Or we might go the same way as far as Vancouver, then take British ships southward to the Fiji Islands and on to Australia and New Zealand, which are subject to Great Britain, and from there cross the Indian Ocean to the British colonies in eastern Africa, and make our way south to Cape Town and then northward, calling at colony after colony belonging to the English, and back to London. In these two trips we should be under the English flag all the way, and should have to leave out many important British

colonies and countries, including scores of islands in the Atlantic, Pacific, and Indian Oceans.

All of these possessions contribute to the commerce and trade of the United Kingdom, and play an important part in its prosperity and wealth. To a certain extent, they are all governed from London, although some of them, such as Canada, the Irish Free State, Australia, New Zealand, and the Union of South Africa, are practically independent republics; they have parliaments of their own and govern themselves. Nevertheless, each colony looks upon the United Kingdom as its mother country. It is anxious to trade with her and is ready to come to her support when the Empire is in danger. During the World War the soldiers of Canada, Australia, and India did much toward making England and her allies victorious.



XII. THE HOUSES OF PARLIAMENT — HOW ENGLAND IS GOVERNED

PUT on your best clothes this morning. We are going to the more fashionable parts of the city and we may see the King. We shall drive through the chief shopping sections, take a turn in Hyde Park, and later visit Parliament and perhaps meet some of the high officials of the British Empire. We hire automobiles for the day, leave Trafalgar Square, and ride first through Regent Street, Oxford Street, and Piccadilly. The buildings are cleaner and better than farther down in the city, and there are many magnificent stores filled with fine goods. We stop here and there to buy presents or things we need on our tour, and then go into Hyde Park, passing the great statue of Achilles, erected in honor of the Duke of Wellington

from cannons captured from Napoleon at the battle of Waterloo.

How beautiful the park is! It contains about four hundred acres and is in the heart of this mighty city of London. We motor about through groves of magnificent trees and velvety lawns. We ride around the Serpentine, a silvery lake that winds this way and that, and are told that before eight o'clock in the morning and after eight in the evening it is filled with boys and men swimming and plunging about in the water. The time for bathing is known by the raising and lowering of a flag, the park authorities fixing the hours for the sport.

Leaving Hyde Park, we visit the British Museum, which has the largest collection of antiquities, coins, books, manuscripts, and drawings in the world, and then go to the National Gallery to see its beautiful paintings. We go next to the palaces of Buckingham and St. James, where the King sometimes holds his receptions. The palaces are more like our government department buildings at Washington than ordinary residences. They face St. James Park and each has a garden about it. Had we the proper introductions we might enter and be presented to the King.

The government of the United Kingdom is a limited monarchy; that is, the King can rule over it only as the constitution and laws prescribe. The laws are fixed by Parliament, a body of men much like our Congress, elected by the people. Both men and women have the right to vote and to be members of Parliament.

Parliament directs what the King may do. It fixes all the taxes to be levied, directs how the money shall be spent, and makes all the laws. For this reason the British say that their country is quite as free as our own, although ours is a republic.

But let us visit the Houses of Parliament. They are in the Palace of Westminster, a magnificent building situated on the north bank of the Thames. It covers more than twice as much ground as the Capitol at Washington. We motor through St. James Park and down Whitehall Street



A London policeman

to the river, stopping in front of the palace. Here we are met by one of the policemen on guard and we show him our passes from the American minister. We pass other policemen as we enter the building; they wear uniforms including tall helmets and look very imposing. The door-keepers also are in uniform, and each of the messengers has on his breast a brass medal as big around as a teacup, with a lion and unicorn upon it.

It is a Sabbath-day's journey to go through the palace, for it has more than one thousand rooms. We visit only the library and then enter the galleries of the House of Commons high above the great rectangular pit where the House meets. The walls of the pit are of richly carved oak

darkened by age, and the roof is made of panels of stained glass through which the light comes.

Cast your eyes into the pit. There on those long cushioned benches sit the men who really rule England. Most of them are dressed in black, and each has a tall silk hat on his knees or on the seat beside him. There are no desks, and many of the members are writing on paper which they rest on their hats.

Notice the man in the long, black gown sitting in the rostrum at the end of the chamber. His hair is in a queue at the back, and it falls down on his breast in front. It is white, yet the man's rosy face is unwrinkled, as are those of the other white-haired men writing at that table below him. They seem young, notwithstanding that their hair betokens old age. They are young. They are the speaker and clerks of the House of Commons, and, as such, custom requires that they wear these wigs of snowy white.

A member is rising to speak. He starts in a conversational tone but soon grows excited. His words are stirring up the whole house. There are cries of "Hear! Hear!" and "No! No!" from all parts. The speaker calls "Order." Now three other members have jumped to their feet. They are shouting out their objections, and there is a hubbub in the huge pit below us. Ordinarily the House of Commons is more quiet than our House of Representatives, but when important questions come up the members often lose their dignity and shout at one another.

We shall now go into the House of Lords, where the chief nobles of the United Kingdom have seats. The English people are divided into peers and commoners, largely according to birth. There are scarcely a thousand peers, but millions of commoners. The peers consist of five ranks: dukes, marquises, earls, viscounts, and barons. There are



On the Thames are the Houses of Parliament, where the laws of Great Britain are made

also orders among the commoners whose members have the title of Honorable and Sir. Among the nobility the eldest son usually succeeds to the rank of his father, while the other children are only commoners, although by courtesy they may have minor titles.

We find the House of Lords much more quiet than the House of Commons. Some of its members hold their seats on account of birth, others are created by the King, while others are elected for life or for shorter periods, and some are bishops of the Church of England.

Leaving Westminster Palace, we visit Westminster Abbey hard by to see the tombs, statues, and memorials of the men whom the English have delighted to honor. The monuments include those of military and naval heroes, scientists, and literary men. We admire those of some of the kings, but are more interested in the ones erected to Sir Isaac Newton, who discovered the principle of universal gravitation, to James Watt, the father of the steam engine, to Charles Darwin, the naturalist, and to such writers as Addison, Goldsmith, Tennyson, Browning, Dickens, and Thackeray. We stay some time in the "Poets' Corner" before the monuments of Milton, Chaucer, and Shakespeare, and also before the busts of Longfellow and Lowell, who are as much loved in England.

Near Westminster Abbey stands a statue of Abraham Lincoln, the gift of America to Great Britain. It is a copy of the statue by St. Gaudens in Chicago, and was unveiled with solemn ceremonies in July, 1920. Lincoln is held in as great honor in England as in his own country.

On our way back to the hotel we stop at some of the chief public buildings to learn more about the government. The British King has his cabinet just as our President has; but while the President need not act on the advice of his

cabinet, the King must do so, if the acts are approved by the House of Commons. Each of the King's ministers has a great department with thousands of clerks under him. We visit the treasury, which has to do with the finances of the empire, and then go into buildings which contain the foreign, colonial, and Indian offices.

Before returning to our hotel we visit the department of the war and navy, learning much about the army and the immense fleet of warships which guards British commerce. We then go to the postoffice department, which has control also of the telegraphs, telephones, and cables, and ask the cable clerk to send some messages across the Atlantic. He gives us the blanks and each writes his dispatch. A few moments later our words are flying through the wires over the bed of the ocean on their journey of two thousand and more miles to Nova Scotia, and thence through the land telegraph wires to our homes. They will be there before we can reach the hotel, and our parents and friends will know we are safe, well, and happy.

Compare England in size with the state in which you live. What are its principal crops? Why does it have to import food? Give some reasons why Great Britain has become a great manufacturing country.

Where are the chief coal fields of England? (See p. 65.) Of Europe? Of the world? Name some of the important industries of England.

Trace a bale of cotton from New Orleans to the cotton mills of Manchester. About how far does it travel? (See p. 69.) Where does the raw cotton of the world come from? What countries manufacture cotton? Why is Manchester the chief cotton-weaving center of the world? Describe the Manchester Ship Canal and compare it with the Panama Canal.

Locate Sheffield. Tell the story of a pocket knife.
For what is Birmingham noted, and why?

How far is Liverpool from New York? From London? From San Francisco?

Describe some of the chief ports of England. Which are nearest the continent of Europe? From which port do most of the ships for the United States sail?

Show why the United Kingdom must have a great commerce and a large merchant marine.

What great author lived at Stratford-on-Avon?

What is the largest city in the United Kingdom? Compare it with New York in age, population, and importance. Why has it become a great commercial and manufacturing city? Describe what you see in a trip through London.

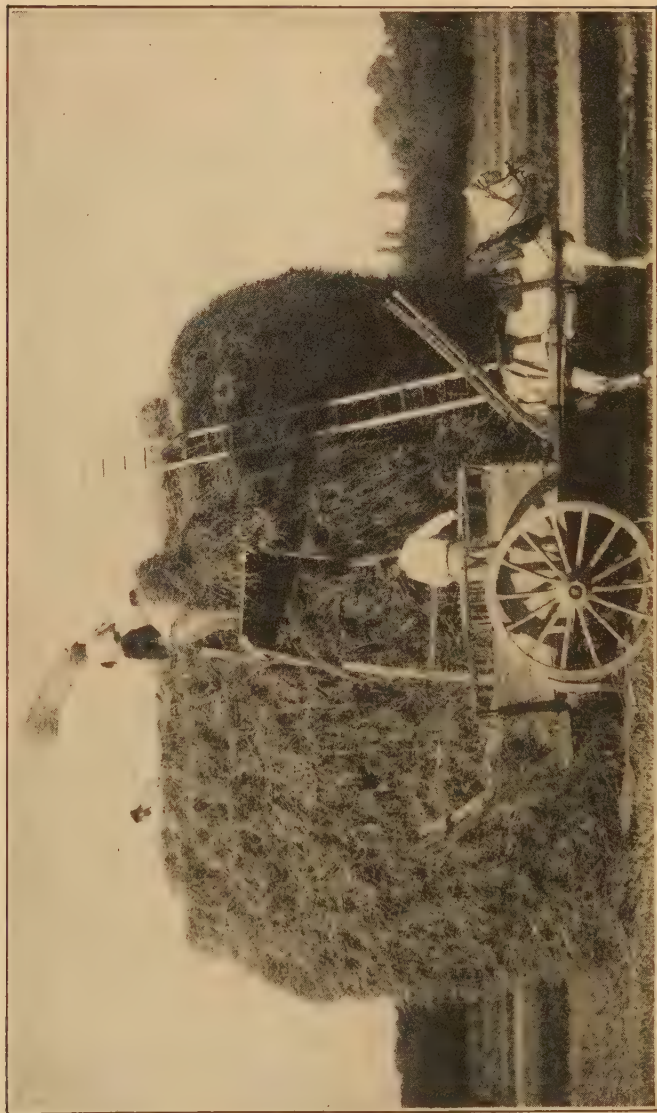
What is the British Empire? What is the United Kingdom? By what routes could you go around the world, landing only at British ports? Name some of the chief British colonies.

Describe the government of Great Britain. Compare Parliament with our Houses of Congress.



XIII. RURAL FRANCE

WE shall never forget our trip across the Channel from England to France. It took us two hours on the railroad from London to Dover, where the English Channel is narrowest, and there we caught an express boat that carried us over to Calais (kă'lă) in less than an hour. But such an hour! We never thought so much misery could be crowded into sixty short minutes. We were rolled and pitched about by the waves even more than on our voyage across the Atlantic. We could not walk on deck and were seasick all the way over. We longed for the tunnel under the channel, which England and France are thinking of making. The distance is only twenty miles, and trains could pass through the tunnel in thirty



Stacking wheat in France. The French grow more wheat to the acre than we do

minutes or less. Then one would be able to go to bed on the train in London and wake up in Paris.

We spent but a few hours in Calais, going first to the custom house to open our trunks that the officials might see we had no goods for sale. We visited the shipyards, watched the French women making lace, and looked at the seven great forts built to defend the port in time of war. For a similar reason the English have fortifications at Dover.

We took a train at the station not far from the boat, and since then have been traveling from one place to another. How different everything is! The signs are printed in French and we have to translate the advertisements before we know what they mean. Our fellow passengers speak a strange language, gesturing much as they talk. We thought we knew something of French, but they speak so fast we cannot make out the words. The conductor comes to the door and touching his cap calls out something we cannot understand, for he runs all his words together; but the French passengers show their tickets and we do the same. Listen to the crowds at the stations! They are all jabbering in French and what really seems strangest is that the little children are speaking this language as easily as we do our own.

How polite every one is! Even the boys take off their hats when we ask them a question. Men shake hands when they meet and again when they part, and they often kiss the hands of their women friends and relatives when they greet them. Over there two men are embracing each other. They kiss on the cheeks, each pressing one kiss on each cheek of his fellow. This is common in France.

The French are fond of society. We see women chatting as they sit with their knitting outside their houses. There

are family parties about the tables in the parks and in front of the cafés on the streets, playing dominoes or other games while they drink wine, chocolate, coffee, or lemonade. They seem to enjoy themselves. Many are reading the newspapers. The French are intelligent and well educated; they have all sorts of schools, as we shall see later.

But there, the bell rings! The train is leaving the station and that is the notice to start. Now we are moving rapidly over the country. How comfortable it is! France has a good railroad system connecting its cities and towns with one another and with all parts of Europe.

See the woman there at the road crossing! She has a little red flag which she waves at the engineer as he passes. She blows a horn to warn people that the cars are coming and puts down the bars to keep them from walking across the tracks.

How small the farms are! France is made up largely of small farms, and most of them belong to the common people. In the United Kingdom, which we have just left, most of the land is owned by twenty thousand men, composed chiefly of the rich and the nobility. France is only a little less than twice as large as Great Britain and Ireland, but it is owned by millions of people. Nearly every farmer has his own bit of land, and even those who work for others have several acres apiece which they tend between times. This is a good thing for France. Each owner feels that a part of the country belongs to him and he is interested in its welfare. The French people think no other place equal to France, and hence stay at home. They farm their land so well that they get much more from an acre than we do.

The French are noted for their thrift. Nearly every one owns one or more government bonds or has money in the

bank or perhaps in a stocking hidden away under the rafters. It is often said that the French are the richest people of Europe, and so they were before the World War. They know how to use food materials so well that they could take what we waste and live upon it. The common people dress plainly and look healthy and happy.

Now we are traveling through one of the wheat regions. There are many such in the northern and central parts of the country. Europe produces nearly one half of all the wheat grown on the globe. Its chief wheat countries are Russia, France, Italy, and Hungary. Of these, France ranks second, and her crop to the acre is far greater than ours or that of any other country in Europe. She grows also oats, barley, and rye, as well as sugar beets and potatoes and all the other vegetables we have. About three fifths of the land is under cultivation, and the country produces almost all that it needs for food.

The French gather thousands of tons of walnuts and chestnuts each year. The chestnuts grow on great trees in the forests. They are twice as big as ours and are used largely for food. The people roast or steam them and eat them with salt or with milk. They grind them to a flour and make bread and cake. They use them also as a candy known as "*marrons glacés*."

France has many delicious fruits. There are orchards of apples, peaches, and pears in the north, and in the south groves of lemon, orange, olive, and mulberry trees. There are many provinces in central France where we shall never be out of sight of the vineyards, for this is the chief wine-producing country of Europe.

But let us leave the train to visit some of the farms. The road is as hard as stone and as smooth as a floor, and our motor cars fly along under the shade of the tall poplars

and other trees that line the roadways. It is early morning, but the people are already at work. The women are laboring side by side with the men in the fields. Some of them are bareheaded, some have bright handkerchiefs about their heads, and some wear sunbonnets. They do all sorts of light work. There is one weeding sugar beets, and here is another cutting the thistles out of a field of green wheat. We stop at a place where a man is plowing; he wears a cap and a suit of blue cotton with a long shirt or blouse buttoned down the front outside his trousers. He has on sabots, or huge wooden clogs. In the field at the right three boys are planting something. They are bareheaded and barefooted. They laugh as they work, looking up and saying "*Bon jour*," or "Good day," to us as we go by, waving our hands.

But where are the farm buildings? There are none in the fields. The farmers live in villages and go out to their work. There is a village now about three miles away. Let us walk to it. How different it is from our small country towns! The houses and barns are all mixed together. They are of one or two stories, built of stone or of mud mixed with straw, and roofed with red tiles or straw thatch. The walls are whitewashed except near the ground where there is a black coating of tar to keep out the damp. Each house has a stable and outsheds hard by; the stable is often a part of the house, the cow stalls being next to the bedroom or kitchen. Nearly every family has a rabbit yard. Rabbits are as common here as chickens are in our villages.

One of the farmers invites us to enter his home. He takes us into the kitchen, which is the chief room. It has a brick floor, a great fireplace at the end, and a bed in one corner. Hams and flitches of bacon hang from the ceiling and there are some prints on the walls. Our farmer wears

a cap, a blue blouse, and blue trousers. His wife has on a dark gown and a white cap. She has a half-finished garment on her lap, on which she sews as she talks.

See that hand loom over there! Our hostess weaves cloth in the winter when she cannot work in the fields. Many of the women make beautiful embroideries and laces.

Leaving the house, we stroll through the village, stopping at the country store and visiting the church, and then drive on to a larger town not far away, where we find all sorts of work going on out of doors. Here on the steps of their houses the women are knitting and sewing; there they are cleaning vegetables for dinner, and a little farther on a girl is combing her hair right out in the street. It is the same with the men and the children. During bright days tailors and shoemakers bring their work to the sidewalks, school children study out of doors, and the little ones play all sorts of games in the streets.

See that girl on the doorstep with her doll in her arms. What a pretty little mother and what an odd baby! The doll's legs are wrapped round and round with a white cloth into a tight bundle. That is the way some French babies are dressed, and the girl could not imagine her baby a real one if it wore a dress such as our babies wear.

After visiting the public museum and the library we go into some schools. The French are among the most advanced of all nations in their learning and culture. They have many high schools and colleges and are noted for their scientific and literary attainments. We spend some time in the public schoolhouses. We smile a little at the boys because they are dressed much like the girls. Many of them wear black aprons or smocks that fall to their knees. Others wear knickerbockers so short that there is a wide patch of



Our young Allies. The boy at the left wears a smock

bare skin between the ends of their trousers and their short stockings. It makes us think of the kilts of the soldiers we saw in Scotland. The larger boys have portfolios or satchels in which they carry their papers and books.

The teacher tells us the school hours are from eight o'clock until four with a two-hour recess for dinner. He shows us the savings bank in which the children make deposits as small as one cent at a time, and says that the parents sometimes give the boys and girls money to put into the school bank so that they may have a capital with which to start life. These school banks are so popular that hundreds of thousands of accounts are opened by the children.

Our town is on the edge of a forest and we take a long drive through the woods. How clean and well-kept everything is! There is hardly a twig on the ground, and not a rotten log or stump to be seen. Even the bark of small trees is saved, and that of some kinds is stripped off and used to tie the sheaves of wheat and oats.

Where the trees are cut down they are chopped off close to the ground and every chip saved. Fuel is costly, and the people do not waste it as we do. The wood is made into little bundles for sale; in the cities it is often sold by weight.

The French have a saying that a tree earns its own living. They are always planting trees. Every forest has its keeper, who can tell when each tree is at the right age for cutting. It is forbidden by law to destroy anything in the government forests. The result is that, although France is an old country, about one sixth of it is still wooded. The forests were of great value in supplying lumber for the use of our soldiers and those of our allies in the World War.

XIV. COMMERCIAL AND MANUFACTURING FRANCE

LET us now look at France on the map to find, if we can, why its people have become one of the greatest nations of Europe. In the first place, they are industrious and thrifty and their country has a rich soil and an excellent climate. France is five times as big as Ohio, and more than four times as large as New York. It is in the same latitude as Nova Scotia and Newfoundland, but the seas about it make its climate as mild as that of our middle Atlantic and south Atlantic states, and the southernmost portions are as warm as Florida. It has a copious rainfall and all the conditions needed to raise crops. It has also mines of iron and coal and a people who are skillful in making goods which are in demand all over the world.

Moreover, France is so situated that she can easily ship her products to other lands and bring in the raw materials she needs for her industries. She is the only country in Europe with excellent harbors on two seas. Spain touches the same seas, but has a rim of mountains that prevents her taking advantage of the oceans. France fronts on the Atlantic at the north and west. She lies just across the channel from the great market of the United Kingdom, and by the Atlantic she has easy access to North and South America. On the south the Mediterranean Sea gives her cheap water freights to Italy and the other countries of southern Europe, and by the Suez Canal she can reach the vast population of southern and eastern Asia. The Mediterranean is also a water bridge to Morocco, Algeria, and Tunis, which are dependencies of the republic.



The position of France in the continent of Europe is excellent. She is in the most thickly settled part of that grand division, and there are rich nations with many wants all about her. The country consists of rolling plains with a rough, volcanic plateau in the center, and walls of mountains on the south and east. The surface slopes in such a



A French canal. The country has almost four thousand miles of canals.

way as to furnish the navigable rivers of the Seine (sân), the Loire (lwâr), the Rhone, and the Garonne (gâ-rôn'), giving water communications to the sea. Moreover, France has many canals. The lay of the land is such that canals have been cut to unite these rivers, and by the Canal du Midi (mē-dē), which runs from Bordeaux to Marseille (mâr-sâ'y'), the Mediterranean and the Atlantic Ocean are brought together at the Bay of Biscay. By passing through that way boats can save the long distance around the Spanish Peninsula, which is almost equal to that between New York and Panama. There is also a lock canal from the Seine to the tributaries of the Rhine, in which boats are lifted over the Vosges (vōzh) Mountains through a pass more than a thousand feet high. We could visit all parts of France by these rivers and by the canals that connect them. More than four fifths of the interior trade is carried upon the water.

France is well supplied with railways. With the exception of Germany, she has more railways than any other country in Europe and she stands fifth among the countries of the world in her railway transportation. There are six great systems, five of which pass through Paris. The most important is the Paris-Lyon-Mediterranean Railway connecting Paris and Marseille. It commands the traffic of the Rhone valley as well as that going to Switzerland and southern Germany. The Paris-Orleans Railway connects Paris with Bordeaux and the Northern Railway extends from Paris northeast to Belgium and to the ports on the English Channel. This road passes through the richest mining region of France. The Southern Railway crosses south France from east to west. It is the only trunk line which does not touch Paris.

During our journeys we go to the principal seaports of

the country. We visit Bordeaux, Brest, and St. Nazaire (săn nă-zâr') on the Atlantic, where many of our soldiers landed during the World War. We spend some time at Havre (âv'r'), the port for Paris at the mouth of the Seine, where there are steamers from New York and other Amer-



Our main line of travel in France

ican ports unloading cotton, tobacco, wheat, meat, copper, agricultural implements, and other machinery to be sold to the French. Some of the steamers go as far inland as Rouen (rwän') to unload their cotton, and river boats go on to Paris. There are also ships from Brazil and Argen-

tina at the wharves of Havre, and many from the United Kingdom, Germany, and the other countries with which France has a great trade. We are especially interested in Bordeaux, near the mouth of the Garonne. It is the chief wine port of the world, and we see many vessels taking on wines for other countries. The French produce enough wine annually to give a gallon to every man, woman, and child upon earth and have some left for themselves.

From Bordeaux we motor out to look at the vineyards. They are much the same as in other parts of France where fine wines are produced. The vines are not trained upon arbors or latticework, but are tied to stakes about as high as a ball club, the branches being cut almost down to the ground every year. Each vine has its own stake. Many of the hills are terraced, the rows making green steps up the hillsides. See the women hoeing in that field over there. They wear bonnets so deep we cannot see their faces except when they look up. There are also many children at work.

During our stay in Bordeaux we visit the wine cellars, walking through cave after cave filled with great casks and thousands of bottles carefully arranged upon shelves. Such caves are common in all the wine-growing regions.

Leaving Bordeaux, we take the express train through to Marseille on the Mediterranean Sea. We ride past vineyards for miles. Now we go by an orange orchard, and now see pale yellow lemons looking like eyes out through the green leaves. There are dark green olive trees and semitropical plants. We see men, women, and children at work everywhere. The women wear caps and woolen dresses with short skirts. Often the children wear wooden shoes. See that drove of donkeys, each carrying two panniers of vegetables or fruits to market. Farther on there are some mules plowing the fields. Everywhere



Peasants gathering grapes from a vineyard in France

are roses and other beautiful flowers. There is so much to see that we are sorry when we reach the end of our journey.

We are now in the Florida of France. It is so warm here in the winter that people from other parts of Europe come to enjoy the bright sun. The flowers always bloom, and at Grasse (gràs), not far from Nice (nēs), we find factories making scents and perfumes to be shipped all over the world. There are flowers here all the year round, and the factories are kept busy making the various scents from the flowers of each season. In the early spring they gather millions of violets and jonquils and make perfumes of them. Later on they have roses and orange blossoms, and in the fall comes the lavender. Every one works in the flower gardens, and we find many children in the factories. We visit the perfumery of Bruno Court, where they handle millions of roses and vast quantities of other flowers of all kinds. The sweet-smelling blossoms are brought and poured upon pure white fat, which absorbs the perfume. After this the fat is treated and sold as pomade, or it is mixed with oil and dissolved in alcohol, producing perfumery extracts, some of which are so strong that a drop as big as the head of a pin will scent a whole room.

We spend some days at Marseille, the chief port for the Mediterranean and the Far East. It is on the Gulf of the Lion at the lower end of the Rhone valley, about twenty-five miles east of the mouth of the Rhone and about five hundred miles south of Paris.

Marseille was a port in the days of the Phœnicians, and the Greeks had a settlement on this spot in 600 B.C. The city of to-day is a great manufacturing center with a population of over 650,000. We go to the wharves, and see the ships taking on cottons and woolens, ribbons and



Women working amid millions of flowers in a perfume factory

silks, sugar and grain, and many other products of France. We see other ships unloading cattle and sheep from Algeria and Spain, peanuts and other oil seeds from Africa, raw silk from Japan and China, and bales of cotton from Galveston and New Orleans.

Leaving Marseille, we take the cars and travel northward through the valley of the Rhone River to Lyon, where the Saône (sōn) River flows into the Rhone. We are now in what is, next to Paris, the chief manufacturing center of France. It might be called Silkopolis or the City of Silk, for it makes more silk goods than any other place in the world. It is nearly as large as Los Angeles and it has become great chiefly from its silk manufactures. In some ways it makes us think of Paterson, New Jersey, where most of our silks are made.

Until the latter part of the Middle Ages, Europe got its fine silks from Italy; but a few years after Columbus discovered America, Francis I, then king of France, sent out word to the weavers of Europe that if they would come to France, they should have more rights than other workmen. He said that they should pay no taxes, their lodgings should be free, and that they might wear swords, a privilege which was then given only to nobles. The result was that many Italian weavers came to Lyon. They first made thick silk goods and brocaded velvets, such as they had at home; but afterwards began to weave light-weight silks. They taught the French how to weave, and the French invented new designs until at last it came about that the most beautiful of all cloths were made by them.

In the meantime, Paris grew to be the center of European fashion and art, and merchants from all nations went there to get new fabrics and styles, until it was found that a

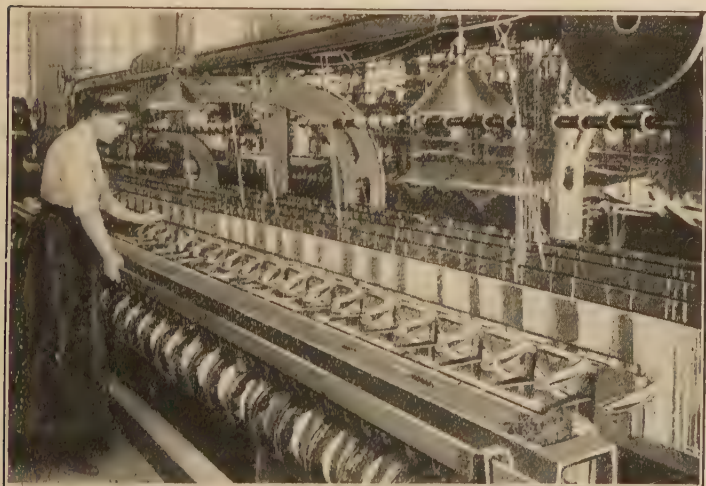
pattern or style that came from Paris was almost sure to sell well everywhere. This is so to-day. The French are supposed to know what is beautiful better than any other nation, and they are always bringing out new styles. It may be well for each girl of our party to buy a Paris hat or dress before she leaves France.

We find schools in Lyon where designing is taught, and where the boys and girls learn how to weave the most beautiful silks, satins, and velvets. These schools have students from all parts of the world.

But where does France get the silk thread for its goods? Some of it, as we saw at Marseille, is imported from Asia, but much of it is produced right here in the Rhone valley. Southern France grows the mulberry trees whose leaves are used for feeding silk worms. The people pick off the leaves and lay them upon boards where the worms, having been carefully hatched from the eggs of the silk moth, are lying. The worms eat the leaves, and they must be supplied with food until they are ready to make their cocoons. The people are kept up all night tending them. At such times you can hear the worms chewing, the thousands of little jaws of a large colony making a peculiar noise. They grow rapidly, and after a time stop eating and spin the cocoons, from which the silk threads are reeled off into raw silk by machinery and by hand. In most years France produces many millions of pounds of raw silk.

Leaving Lyon, we visit St. Etienne (sǎN-tā-tyě'n') to see how ribbons are made. St. Etienne produces more than half of all the ribbons of Europe, and I doubt not that we have many girls in our party who are wearing St. Etienne ribbons this morning. There are thousands of people here who work only on ribbons, and immense factories which make nothing else. Ribbons are made also on hand

looms in the homes of the weavers. We are surprised at the labor it takes to make one ribbon. We have seen how the raw silk is reeled from the cocoons and twisted into thread. Before the weaving begins the pattern must be designed and the loom arranged for it. Electricity must be created for moving the looms, and many people are



Making silk ribbons at St.-Étienne

engaged on the different machines. Indeed, scores of people have labored together to make the ribbons you have on your dress or in a bow on your hair.

How beautiful the ribbons are! Some of them have flowers and birds raised in satin on soft silken grounds. Some are of gold thread and others of silver. Others are decorated with all sorts of leaves, and some are as wonderful in their colors as a peacock's tail, all made in these mean little homes.

St. Etienne lies on the swift river Furens in the midst of coal fields, where water power and cheap fuel have caused numerous factories to spring up. This city might be called the Sheffield of France, for it makes all kinds of fine cutlery, manufacturing ten thousand knives every week. It also makes guns and ammunition and railroad materials.

We shall find France a great manufacturing country, for there is scarcely a village that is not noted for some industry. Not very far from St. Etienne there is one little district that has more than a hundred thousand lace makers, nearly every family being engaged in the work. We see even small children knitting. Some of the lace makers sit in the street outside their houses, plying their reels, and we find them also in the market place and on the church steps. They are making the torchon lace sold in our country. Others labor at delicate patterns stitched upon pillows, and others are making lace with needle and thread.

The centers of the woolen and linen industries are interesting. We have all heard of lisle thread gloves and stockings, and wish to see the place from which they come. This is in northern France, at Lille (lêl), a city which, before the World War, made goods of this kind to be shipped all over the world. Most of its factories were destroyed during the war, but many have since been repaired, and Lille is fast becoming a greater industrial center than it was in the past.

There are curious manufacturing villages in the Jura and Vosges Mountains, little Pittsburghs walled in by the hills, each of which has its blackened chimneys and clouds of coal smoke. One town produces nothing but clocks, another makes nails, and a third, strange to say, devotes itself to the study of noses. In the last place the people

are engaged in manufacturing spectacles, making them so they will fit the long nose, the short nose, and the no-nose-at-all people all the world over.

But there is one thing we must see before we go on to Paris, and that is how china is made. We manufacture fine porcelain at Trenton, New Jersey, and at East Liverpool, Ohio, but French china is sold in almost every town of our country, the plates or dishes being stamped with the name of the place where they are made. Many of the finest bear the word Limoges (lē-mōzh'), and it is there we shall go. Limoges lies in the south central part of France, near some rich coal mines and close to the beds of pure white clay of which the china is made. We watch men dig the clay from the earth, and follow it to the mills where it is ground fine. It is then mixed with water into a stiff paste, which is treated in certain ways until it becomes a mass not unlike bread dough after kneading. The workmen take the white dough and mold it into all kinds of beautiful dishes, vases, and other such things, which are then put into kilns and burned until they are as hard as glass, when they are taken out and cooled. Some of the dishes are painted and some are decorated with gold. Some are as thin as an eggshell, and so translucent that we can almost see through them.

Later on in our tour we visit the town of Sèvres (sâ'vr'), near Paris, where the famous Sèvres ware is made. The factory there has been in the hands of the government for more than one hundred years, its chief object being to design beautiful things for the benefit of private manufacturers. While we are at Sèvres we see a tea set worth three thousand dollars, and copies of famous pictures on porcelain, some of which sell for as much as ten thousand dollars apiece. They are beautiful, but far too costly for us.



Airplane view of a portion of Paris and the Île de la Cité

XV. THE MOST BEAUTIFUL CITY OF THE WORLD

LET us stand together on the top of the Eiffel Tower and take a look over Paris before we begin to explore it. We are nine hundred feet above the ground on a huge skeleton of steel rising from the banks of the Seine in the heart of the most beautiful city of the world.

Below us lies a vast network of cream-colored houses built in regular lines along wide streets crossing each other in almost every direction. There is a wall around the city, and with a glass we can see many forts with soldiers moving about on the ramparts. Paris has been compared to a great camp. It is twenty-two miles in circumference and is regarded as the strongest fortress of the world.

Look down upon it and see how clean everything is! Observe the wide streets. They are walled with magnificent buildings and shaded by great forest trees. Those are the boulevards of Paris; each has sidewalks as wide as the ordinary roadway, and the space between is paved with asphalt or smooth wooden blocks. The streets are washed with a hose every morning, and in the evening the rag pickers go about and gather up the scraps of paper, cloth, and other things that have fallen during the day.

See how the river winds its way through the city and how the water sparkles under the rays of the sun! It is so far down that the boats on it seem to be toys and the men hanging over the walls pygmies. The street cars are like boys' express wagons, and the automobiles like great beetles crawling along. That river is the Seine. It flows from here to the sea, with a channel so deep that ships drawing ten feet of water can come right up to Paris. This

has aided in making Paris one of the chief ports of France, although it is more than one hundred miles inland. There are always boats moving back and forth over the Seine, and if we should travel up the Marne, which joins the Seine just outside of Paris, we should find a canal by which we could go clear to the Rhine, and by transferring to other boats travel on through Belgium and Holland to the North Sea.

Notice how the railroad tracks extend out from Paris in every direction. This is the railroad center of France, and one can get fast trains here any day for any capital of Europe. Seven hours will take him across the channel to London, and he might leave Paris at night and be in Berlin in the morning; or he could go from there to Petrograd, arriving by day after to-morrow. That train shooting off to the south is bound for Marseille and the Mediterranean; there is another just starting out for Switzerland, and there are other roads that extend to the Rhine and the Danube, carrying the Oriental express, which goes from here to Constantinople in less than three days.

Now let your eyes follow the Seine. See the little island in the river with the great church upon it? That is the Isle de la Cité (*ēl də lä sē-tā'*), upon which the Parisii, a tribe of half-savage men, had their chief town when Caesar conquered this part of Gaul about two thousand years ago. The river was easily bridged at this point, and Paris was on the main through road from the south to the north. This and the rich farming country about aided in making it great. Centuries later it became the capital of France and was the residence of the French kings for almost a thousand years. Railroads and canals now connect it with every part of the country.

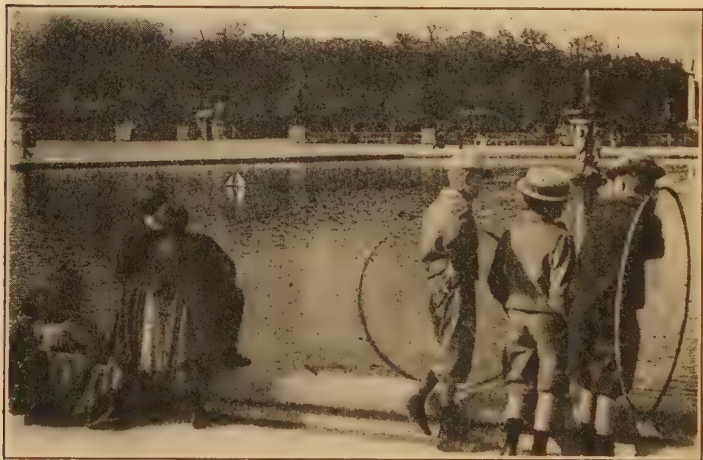
But let us go down from the tower and begin our explo-

ractions. We take automobiles and drive for miles through one beautiful street after another, all walled with light yellow buildings of five or six stories. The buildings are in blocks close to the sidewalks, and they look so much alike that we wonder that the people do not lose their way and go into the homes of their neighbors. The only gardens are at the back, or in little courts inside the houses. Each building contains many families. The Parisians live in apartments, and there are usually stores on the ground floor, with homes on the floors higher up. One family will have five or six rooms; it may be a dining room, parlor, and kitchen, with two or three bedrooms, all on the same floor, just as in our large apartment buildings at home. The buildings here are not tall, and the elevators are comparatively few, so that many of the families must climb three or four flights of stairs every time they go to their homes.

This is one reason why there are so many people on the streets and in the parks. The French love the open air, and as most of them have no gardens of their own, they spend much of their time on the boulevards. There are benches on the streets where we see women knitting, and crowds in the public gardens at almost any time of the day. All kinds of work are done in the streets. Each of the public parks looks as though a picnic were being held in it. This is so especially on Saturday afternoons, when many families eat their lunches under the trees.

We drive to the Arc de Triomphe (ärk dē trē-ôní') and down through the Champs Elysées (shän'zā-lē-zā') to the Place de la Concorde (kôn-körd'). The Arc de Triomphe is one of the most beautiful monuments of the world. It was begun by Napoleon in 1806 in honor of his victories and was completed thirty years later at a cost of more than two million dollars. We are delighted with the

Champs Elysées, or Elysian Fields. They are beautiful gardens with a magnificent avenue running through them. Every afternoon the avenue is crowded with automobiles, carriages, and women and men on horseback, while under the trees children are playing all sorts of games. There are booths where toys and cakes and candies are sold and there are merry-go-rounds and Punch and Judy shows.



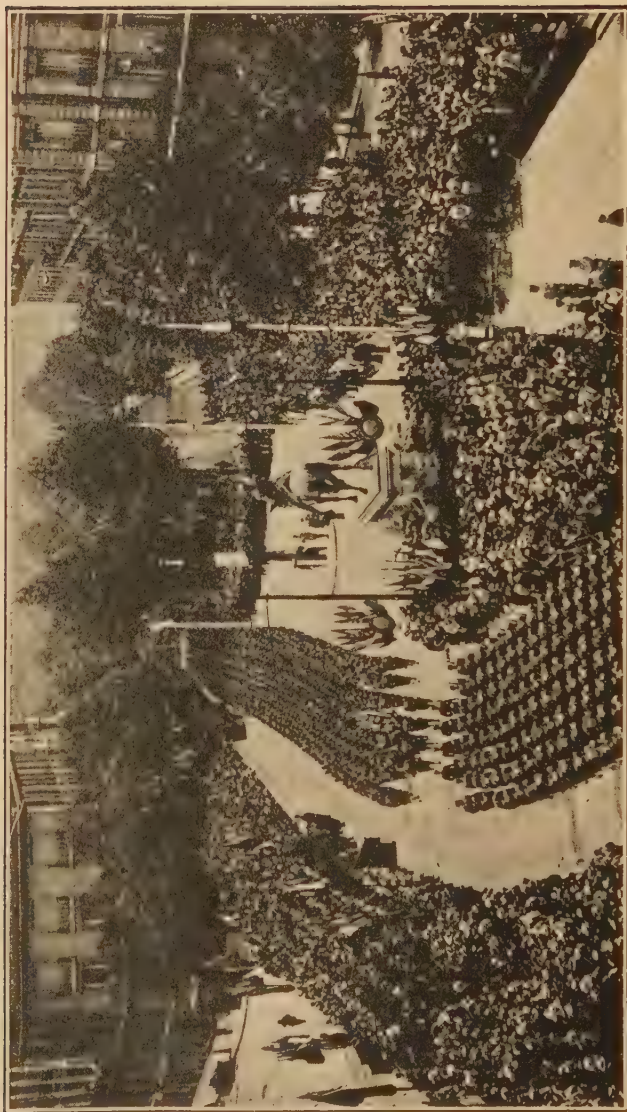
French children playing in one of the parks of Paris

Indeed, there is so much to see that we leave our automobile and walk down the avenue, stopping now and then to watch the French children play. They are romping about as merrily as we do at home, and we wish we knew enough French to stop and play with them. Be careful how you sit down in those chairs along the shady side of the walk! Every time you use one it will cost you a penny, whether you sit there an hour or a minute. Only the long benches are free to the public.

But here we are in the Place de la Concorde. How beautiful it is! I dare say we shall not see anything finer anywhere else in our travels. We are surrounded by gardens and parks and beautiful buildings. There at the east is the garden of the Tuileries (twēl-rē'), on the site of the palace where the kings of France lived, and just beyond is the Louvre (lōō'vr'), one of the most famous art galleries of the world. At the west as far as we can see runs the Champs Elysées with the Arc de Triomphe in the distance, while on the south is the Seine with the Palace of the Chamber of Deputies on the opposite bank.

Now let us turn our backs to the Seine and look in the other direction. That tall round pillar with Napoleon's statue on top is the Colonne Vendome (vāN-dōm') made from the cannon that Napoleon captured from the Austrians and Russians; and that church to the left is the Madeleine (mād-lēn'), one of the most beautiful in France. Farther on we see the roof of the Opera, the largest theater of the world, covering almost three acres; while near us in the Place itself are beautiful fountains, the huge obelisk brought from Egypt, and statues representing the chief towns of France.

Suppose we take a walk on the boulevards. They are filled with people laughing and chatting. There are fashionably dressed men and women moving along arm in arm. There are laborers in blue cotton walking this way and that. Newsboys are crying their papers, girls are peddling flowers, and hawkers are selling pictures, toys, and all sorts of knick-knacks. We pass crowds eating and drinking out on the sidewalk. There are cafés every few steps, and most of them have more customers outside than inside. Families are sitting about tables and chatting as they eat and drink. Many of the men are reading newspapers, and boys and



American troops in Paris marching along the Avenue President Wilson during the World War

girls are playing dominoes on these little iron tables out in the street.

The boulevards are lined with shops, and as we stroll along we seem to be walking through a world's fair. This city is celebrated for its beautiful wares, known as "Articles de Paris." It makes the finest of furniture, clocks, silverware, bronzes, and pictures. We pass jewelry stores where diamonds, rubies, sapphires, and other precious stones, set in all shapes, are spread upon purple velvet cushions behind the plate glass. We visit the huge department stores and wander about among so many fine goods and fascinating notions that we do not wonder that people from everywhere come to Paris to shop. We have trouble in tearing the girls of our party away from the milliners and dressmakers, for the latest models in hats and gowns come from Paris, and they think anything they buy here is sure to be new and in style.

Paris is the chief industrial center of France. It is a great manufacturing city made up of thousands of little workshops employing highly skilled labor. It makes gold and silver articles, toys, paper boxes, artificial flowers, perfumes, gloves of all kinds, and the most beautiful of clothing. It makes also steel and aluminum articles, jewelry and notions, and in most of its products it excels the rest of the world.

We next visit the Halles Centrales (äl sön-träl'), the chief city market of Paris. The best of everything to eat comes to the capital. These "Halles" are great pavilions of iron and glass, covering about twenty acres. It is early morning and we find crowds of women dressed in white caps and short petticoats, and men in great hats and blue blouses, gathered about little pens where the supplies for the day are being sold at auction. They come from the



Café de la Paix on Rue de la Paix, Paris

retail establishments scattered here and there over the city. We stop before a stall where they are selling chickens at wholesale. A Frenchman who wears a white cap and apron is the auctioneer, and opposite him is a woman dressed in black who acts as the cashier and bookkeeper. Nearly all the buyers are women. They bob their white-capped heads up and down as they shout their bids, shaking their hands at the auctioneer as they do so. The chickens come to the stall in crates on the heads of big-hatted porters, and are sold at the rate of a crate a minute.



The porters carry heavy loads on their shoulders

Through one pavilion after another we go, past great crowds who are buying eggs, butter, and cheese, jostled now and then by the market women rushing hither and thither, and by the porters

carrying heavy loads of vegetables and meat on their heads. In one place we see them selling live rabbits, and in another oysters, snails, and frogs' legs. We ask a snail seller about her business and she tells us that a million pounds of snails are sold here every year. The French esteem them a delicacy. Some are imported from Switzerland and many come from the vineyards of France. A fat juicy snail costs two cents or more. We have eaten frogs' legs and found them sweeter than chicken, but we hesitate at trying the snails.

We have come to like the French way of living, although it is different from ours. We enjoy the light breakfast, consisting of a cup of coffee, two rolls, and a pat of unsalted butter, with perhaps a soft-boiled egg in addition. This is all we have upon rising; it is the breakfast of the well-to-do people in France. The poor eat still less at this meal, some having only a piece of dry bread and a glass of cold water. Many of the richer people take their breakfasts in bed, and our hotel landlord tells us we may have our breakfasts in our bedrooms without extra charge.

The next meal comes about noon. The French call it *déjeuner* (dā-zhǔ-nā') or "breakfast with the fork." It consists of meat and vegetables with sometimes a soup, and it is often quite as bountiful as our midday dinner at home. The people spend a long time at their meals. In parts of southern France two hours are set aside for *déjeuner*. Even the business men stop work for lunch and a nap and perhaps a chat with their friends.

The chief meal of the day, however, is dinner. This comes in the evening, when every one eats as well as his purse can afford. Even the poor have a soup, meat, vegetables, and some kind of dessert. Among the well-to-do the dinner comprises a half dozen courses or more. The

plates are changed at each course, and only one piece of meat or one vegetable is brought on at a time. Such a meal usually ends with a small cup of black coffee.

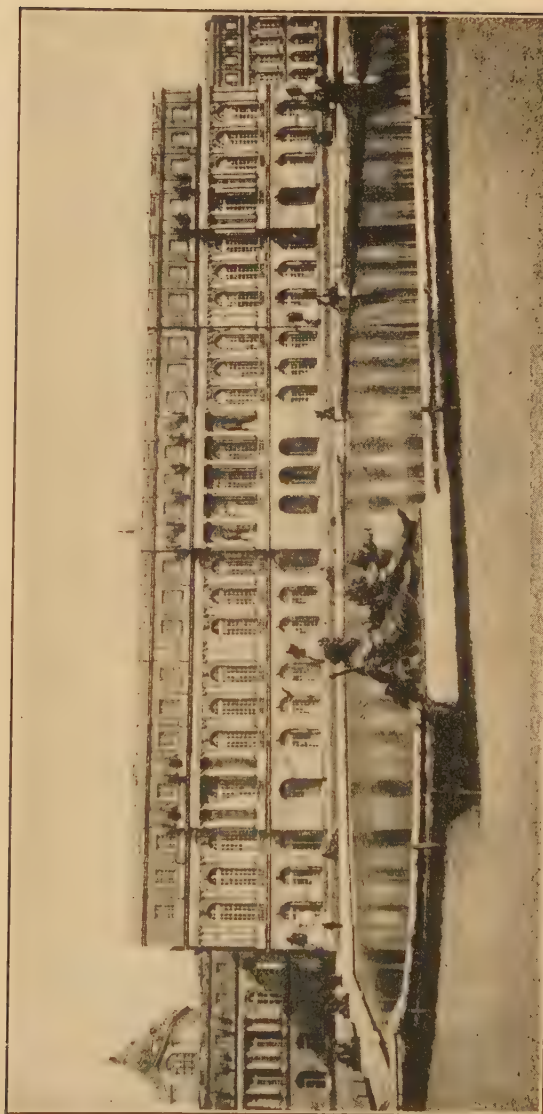


XVI. HOW FRANCE IS GOVERNED

WE are delighted with Paris. The city is a treasury of industry and art, and we find something worth seeing wherever we go. We stroll through palace after palace filled with pictures, and in the great museums of the Louvre grow so tired of the long galleries walled with fine paintings that we are glad to get out into the Garden of the Tuileries and watch the French children playing on the Champs Elysées.

We make excursions to Fontainebleau (fôn-tên-blō') and Versailles (vër-sä'y') in the suburbs of Paris, where the monarchs of the past had vast country homes surrounded by forests. Their palaces still stand, and we repeople them with the characters of French history, as we wander from bedroom to bedroom and from parlor to parlor. Now we sit down in a chair where Napoleon Bonaparte sat and now stand before the cradle-like bed where his son, the King of Rome, lay when he was a baby. We go through rooms where Marie Antoinette and the Empress Josephine lived, and admire the gorgeous furniture and beautiful paintings.

At Fontainebleau we motor through the forests and stop at the fish ponds near the palace to watch the great carp swimming about. An old Frenchwoman in a white cap and blue gown comes up selling bread. We buy a loaf and throw pieces of it into the water. The fish



The magnificent palace and park at Versailles. In the famous Hall of Mirrors the Treaty of Versailles was signed, June 28, 1919

rush for the bread; they fight with each other over the crumbs, even as the nobles who once lived in the palace fought with one another over the favors of kings.

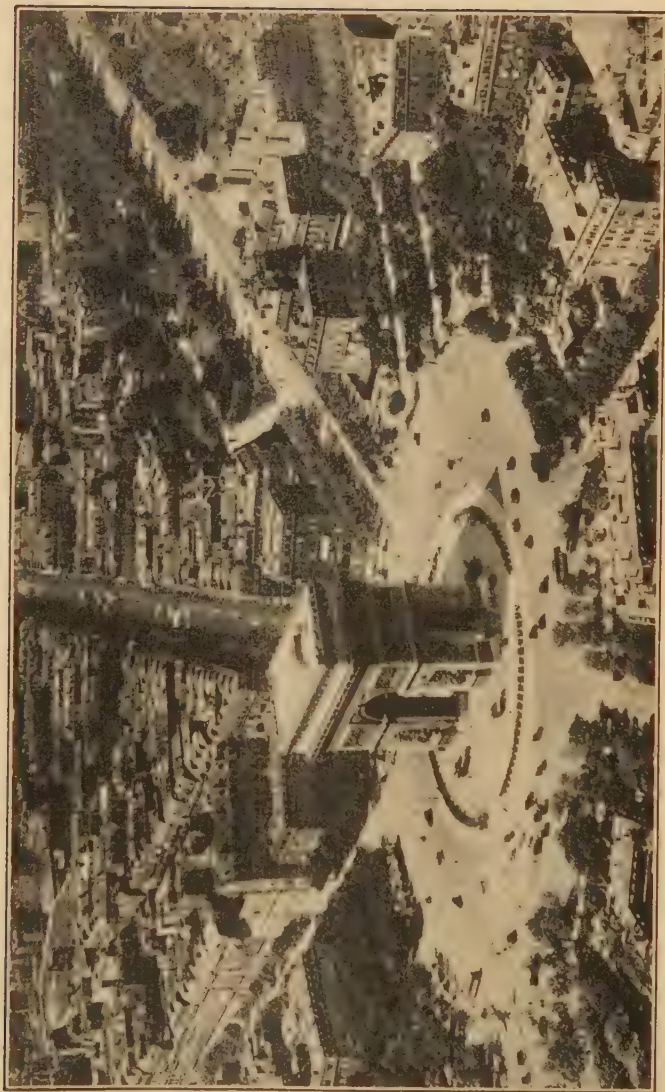
Coming back to Paris we visit the Madeleine, Notre Dame (nō'tr' dām'), and other famous churches, and then go to the Hôtel des Invalides (ô-těl' dā-zăN-vā-léd') to take a look at the tomb of Napoleon Bonaparte. The remains of the famous Emperor repose in a gigantic coffin of granite which was cut from one solid block in the quarries of Finland, and brought to Paris. It stands in a great circular crypt under the dome of the church, resting on a pedestal of polished green stone. There are monuments



Bedroom of Marie Antoinette, in the palace at Fontainebleau

about it, and the old soldier who acts as our guide points out this quotation from Bonaparte's will which is carved on the entrance to the crypt: "I desire that my ashes may repose on the banks of the Seine in the midst of the French people, whom I have ever loved."

In the time of Napoleon, France became the greatest monarchy of Europe. It is now a republic in which the



Airplane view of the Arc de Triomphe, Paris

people elect their own rulers and govern themselves. They have a President, just as we have, and their laws are made by a Senate and Chamber of Deputies, which correspond to our Houses of Congress.

Leaving the Hôtel des Invalides, we walk to the Palace of the Chamber of Deputies, which is not far away. It is a magnificent building on the banks of the Seine, with huge statues of Prudence and Justice at the entrance. We present our cards of admission from the American Ambassador to one of the guards, and he shows us to seats in the gallery from which we can look down upon the chief branch of the Congress of France. The room is shaped like a half moon, the members sitting in rows rising one above the other to the back of the Chamber. The President, who has the same position as our Speaker of the House of Representatives, sits on a rostrum in the front.

Notice the little desk in front of the President. One of the members is standing before it. He is addressing the Chamber, but he is speaking in French and so rapidly that we cannot understand what he says. Now he has finished and another man has taken his place. In our Congress the members rise at their seats when they speak; here every one makes his address from that desk. Watch the man who is talking just now. See how he gesticulates and how excited he is. He is interesting his fellows; they are clapping their hands and making even more noise than the men we saw in the English House of Commons when we were there. The President is calling for order, but the men do not mind him. See! He has a silver bell in his hand and is ringing it. Shouts for order are coming from every part of the Chamber. We wish we knew enough French to understand the cause of all this commotion.

Leaving the Chamber of Deputies we go to the Senate,

which is in the Palace of Luxembourg (lük-sän-boōr') and then cross the Seine to make a short call upon the President of France in his palace on the Champs Élysées. From him we learn that the republic of France is well ruled, although in many ways its government is different from ours. The President, for instance, is not chosen through an electoral college, as in the United States, but by a majority of the members of the Senate and Chamber of Deputies, who are elected by the people. The French President has a cabinet, and while the President of the United States may select any American citizen to be one of his cabinet, the President of France must choose his cabinet only from the Chamber of Deputies, and each of his acts must be countersigned by one of the cabinet.

The members of the cabinet are called ministers. We talk with some of them and they give us much information in regard to the government. We spend some time with the minister of the colonies, looking over the maps of the world at the enormous possessions and dependencies France has outside Europe. These possessions have an area of more than three million square miles. They are nearly as large as all Europe, or the whole United States, including Alaska. In Asia, France owns Indo-China and French India. Across the Mediterranean in Africa she has Algeria, Tunis, most of the Desert of Sahara, and a part of equatorial Africa. She has control of a large part of Morocco, and also has colonies on the Gulf of Guinea and in Madagascar and other islands of the Indian Ocean. She has islands in the Pacific and in the West Indies.

Leaving Paris, we go through northern France, traveling this way and that to visit the battlefields of the World War. We wander about along the Marne and Somme rivers, stopping a while at Belleau Wood, where our troops fought so

bravely, passing through the Argonne forest, where so many Americans were killed, and stopping at Reims (rēmz) to see the ruins of the beautiful cathedral destroyed by the Germans. Most of the signs of the World War have



Plowing a battlefield with an American steam tractor

disappeared. We see men plowing the battlefields with American steam tractors, and great crops of wheat are growing in fields which were cut up by the shells.

We take a run through Alsace-Lorraine, going down into the mines of western Lorraine, where is one of the largest

deposits of iron ore in Europe. It is estimated to contain more than two billion tons, and is of enormous value to the industries of France. We visit also the coal and salt mines, and wander about through rich farms yielding large crops of wheat, rye, oats, and potatoes.

Alsace-Lorraine comprises a territory about as large as the areas of Rhode Island and Connecticut. It formerly belonged to France, but was taken by the Germans in 1870 after the Franco-Prussian War, because they wanted to use its resources in iron and coal in their industries. By the World War, the countries were given back to France, and this brings the boundaries of that country again to the river Rhine. It restores to France also the fine old city of Strasbourg, and adds to her population the millions of French who live in the territory. By the Peace Treaty, France has also the use of the coal mines of the Sarre Basin, so that she now can compete with Germany and other countries in all industries of iron and steel.

Locate France. Compare it in size with other countries of Europe; with Texas. By use of the map, show how well France is situated for trade. What rich countries join her?

What are the four chief rivers of France? Name a port at or near the mouth of each. Mention something for which each is noted.

Describe the railways of France. What European country exceeds her in the length of its lines?

What two new provinces in Europe did France get by the World War? What important minerals have they?

Show the difference in size of the farms in France and England. How does this affect the food supply of the people? Compare the wheat production with that of the United States. (See p. 99.) With several other countries of Europe.

What part of France is like Florida? From where does much of our perfumery come? How is it made?

What brought the silk manufacture to Lyon? What other

countries make silk? (See Carpenter's "How the World is Clothed," and Carpenter's "Asia.") Write the story of a silk ribbon, from the silk worm to the cloth.

What French city makes one think of gloves and stockings? Tell how lace is made. Visit the porcelain factories. What two towns of the United States are celebrated for porcelains? How is porcelain manufactured in China? (See Carpenter's "Asia.")

Locate Paris. Climb the Eiffel Tower and tell what you see. Why has Paris become a great city? For what goods is it famous? How does it compare in size with other European cities? How far is Paris from London? Berlin? Petrograd? Rome? Vienna? Constantinople? New York? New Orleans?

Make a voyage by water from Paris to New York; from Marseille to San Francisco, via Panama; via New York and railway.

Compare the government of the French republic with ours. (See Carpenter's "North America.")

XVII. BELGIUM

BELGIUM is one of the smallest countries of the world, but is more thickly populated than almost any other, and its position and resources have made it very important. A little triangle, surrounded by France, Germany, and Holland, it lies in the very heart of industrial Europe, with a frontage of forty-two miles on the North Sea, and almost directly opposite London and the manufacturing districts of England.

The countries surrounding Belgium form one mighty workshop, and Belgium has the very best place for trading with them and supplying their wants. Moreover, it is connected with its neighbors by excellent waterways, including the Meuse (mûz) and Scheldt (skëlt) rivers which connect it with France and Holland. It has more than

This is a detailed historical map of the Netherlands and Belgium. The title "NETHERLANDS AND BELGIUM" is prominently displayed at the top left. Below it is a scale bar labeled "SCALE OF MILES" ranging from 0 to 60. The map shows the North Sea to the northwest, with islands like Friesland, Zeeland, and parts of Groningen highlighted in pink. Major Dutch cities such as Amsterdam, Rotterdam, The Hague, and Utrecht are clearly marked. Belgian cities like Brussels, Antwerp, and Liège are also shown. The map includes numerous smaller towns, rivers, and canals. A grid of latitude and longitude lines is overlaid on the map, with labels for degrees and minutes. The bottom of the map has a label "Longitude East from Greenwich".

(138)

one thousand miles of navigable rivers and canals and it is covered with railways as with a net.

The shortest and easiest route from Berlin to Paris passes through a valley in Belgium near the manufacturing town of Liège (lě-ězh'), and this was one reason why the Germans, in their hope to conquer the French, broke into this neutral country and tried to make their way through. They were held a few days by the great forts at Liège, but they soon defeated the Belgians and occupied their country during the war.

Indeed, the location of Belgium is such that the country has been fought over again and again by the warring nations of Europe. It has been called the cock-pit of the continent on account of the many important battles that have occurred here. It was just outside Brussels that the battle of Waterloo was fought, and we can see there the hill with a bronze lion on top erected as a monument of the victory of 1815, when the allied armies under the Duke of Wellington defeated the French under Napoleon.

During the World War the Germans cruelly oppressed the Belgians. They cut down the forests, laid waste the land, and practically enslaved the people. The Belgians were among the chief competitors of the Germans in manufacturing and industry, and for this the Germans tried to ruin the industrial centers, destroying the factories and sending much of the machinery and tools off to Germany. As a result of their rule the people were almost starving, and the United States sent them a vast quantity of food and also loaned them many millions of dollars.

It is for this reason, perhaps, that we find ourselves welcomed by the people everywhere as we travel through Belgium. We enter the country from Alsace-Lorraine, passing through the little country of Luxemburg



Two Belgian boys

(lŭk'sēm-bŭrg), and plunging as it were into a land where business and industry seem to be humming. We find that the country has recovered from the World War and that every one is busy, both on the farms and in the factories. Indeed, there is no people more thrifty, and none which has made so much of the country it owns. Belgium has nearly seven hundred people per square mile, which is more than is supported by any other territory of the same size in Europe. The kingdom contains only about twelve thousand square miles. It is nearly one fourth the size of England, and has nearly one fourth the population. Indeed, if Pennsylvania, Ohio, Kentucky, Virginia, West Virginia, and Maryland were as thickly settled as Belgium they would have as many people as we have in the whole United States.

But how can Belgium support such a large population? Its trading position, as we have seen, is one of the reasons. The country faces the sea with excellent harbors, and the materials for manufacturing can be brought in cheaply from abroad. It gets cotton and food stuffs from the United States, iron from France, and rubber, ivory, palm oil, and other products from its great colony, the Belgian Congo in Africa. The southeastern part of the country has two rich coal fields with iron near by, and it has also silver, zinc, and lead mines and the raw materials for making glass and cement. A great deal of Belgian plate glass is exported to the United States.

Moreover, the soil of some parts of Belgium is so rich that the country can raise most of its food. Among the chief crops are wheat, barley, oats, rye, and tobacco, as well as flax, sugar beets, and potatoes. The people are excellent farmers. Belgium raises more wheat per acre than the fat lands of the Red River valley in Minnesota.

and North Dakota, and its crops of potatoes are six times as large per acre as those of the United States.

The farms are small and much of the land is spaded as we spade our gardens. The farmhouses are scattered so thickly over the landscape that the country seems one vast town, each little farmhouse having its garden about it. We see both women and men working in the fields, and the children are doing their share of the labor. We see many women hoeing and weeding, and we pass fields in which they are cutting the grass to make hay. There are no fences. The many-colored crops stand out like the patches of a crazy quilt.

Our motor cars fly along the highways as over the asphalt streets of a city. Belgium has enough roads paved with stone to reach twice as far as from Boston to San Francisco, and its country roads, if joined together, would extend around the world. Until the World War, the chief highways were shaded by old forest trees, but many of these were destroyed by the Germans and only the stumps are still standing.

We are interested in the farm buildings. The houses are low one-story structures roofed with red tiles or gray thatch.

See those little children going along with their brother! What a clatter they make as they tramp over the stones in their wooden shoes! This is the footgear of most of the poor people here and also of those in Holland and some parts of northern Germany.

Among the queer sights on the roadways are the dogs hitched to wagons and carts, hauling milk, vegetables, and all kinds of light wares. This is a land where the dogs have to work for their living. Every man with a push cart has a dog to help him, and the milk woman rides with her



Belgian dog hauling a milk cart

cans in a cart pulled by a dog. When the carts stop the dogs drop down in the shafts and rest until their masters order them to go on again.



XVIII. MANUFACTURING BELGIUM — BRUSSELS AND ANTWERP

AS we move about over Belgium, we pass through many towns and cities half hidden in smoke, and can see almost everywhere the smokestacks of great industries standing out against the blue sky. In the coal mining centers huge mounds of coal dust and waste rise high over the houses. In some places the coal dust is burning, and the black mounds make us think of smoking volcanoes, the sulphur in the coal giving forth a strong smell of brimstone. Many of the mines are of great depth, and in some the coal has to be raised more than a half mile to the surface. Mules and horses are used in the mines, and we are told that they often live from ten to twenty years underground.

Belgium has iron mines, but so much manufacturing is done that both coal and iron are largely imported. The Belgians have always been noted for their skill in manufacturing. Their industries were famous even before the discovery of America, at which time their cities were among the richest of Europe. During the Middle Ages Antwerp was almost as important as London, and ships from everywhere came there for fine goods. Then a thousand vessels could be seen at one time in the river Scheldt, and five hundred loaded wagons passed daily through the gates of the city. The people made so much money in weaving and in other industries, and in commerce, that the leading

men dressed in velvets and satins. They had their guilds or trade unions, and in the chief cities we shall see the old town halls, magnificent buildings put up at that time.

In traveling about we find that the Belgians still have large woolen and linen mills at Ghent and elsewhere, and also factories in which thousands of women and girls are weaving cotton from our southern states. We go to Liège, to visit the steel works, to Tournai (toor-ně') to see how Brussels carpets are made, and to Mechlin to study the manufacture of lace.

Belgium produces some of the finest lace of the world. The lace is made chiefly of linen, the soil and climate being especially suited for flax, which grows almost everywhere. We travel through fields where roughly dressed men and

women wearing wooden shoes are kneeling, weeding the flax, and through villages where they are breaking it and turning it into thread. We see scores of girls engaged in making lace in their homes, and hundreds at work in the factories.

Belgium has schools of lace making, and it has villages where nearly every girl is engaged in making lace upon pillows. In this work the design is marked out with pins. Every girl has her own pillow and only one person can work



Our route through Belgium



Almost every girl in Belgium is taught to make lace

on a piece at one time. The threads wound upon bobbins are moved out and in through the pins and over and under. In some of the patterns eight hundred different threads are needed, and the finer varieties require months of labor. A girl may spend weeks upon a fine handkerchief. Much of the lace is for vests, collars, and cuffs. Some is used for wedding dresses, a single dress often costing as much as ten thousand dollars. We are shown lace fans worth fifty dollars apiece, and feel rich as we hold in one hand a hundred dollars' worth of this delicate fabric.

We spend some time in Brussels. It is the capital of Belgium and has so many fine buildings that it reminds us of Paris or the city of Washington. It is much larger than Washington and some of its streets are as wide as Pennsylvania Avenue. We stroll along the boulevards, watching the people who sit chatting at the tables outside the cafés and stopping to buy some lace in the Boulevard Anspach. This street is one of the finest of Brussels. Strange to say, it is built over a river. When Brussels was founded the street ran along the banks of the Senn, but it was thought unhealthful to have an open stream through the town, so they built a wall above it and covered it with stone and earth, and now one has to go outside the city to know that a river runs through it.

Later we visit the palace of the king, and spend a few hours in the Belgian parliament. The country is governed by a constitutional monarch, much like the United Kingdom. We call upon a cabinet minister and learn that we sell several times as much goods to the Belgians as they sell to us. The reason is that they must have our cotton and other raw materials for use in their factories. On the other hand, we take much Belgian rubber, which



The Botanical Gardens of Brussels are noted for their
beautiful flowers

is brought from the Belgian Congo to Antwerp and sent from there across the Atlantic Ocean to us.

During our stay we call upon the minister of the colonies, who shows us maps of the Congo and of the vast possessions of Belgium in Africa. At the close of the World War, Belgium received a mandate over a part of German East Africa. The Congo has rich beds of copper, iron, and coal. It produces gold and diamonds, and it is now growing cotton. That territory is more than eighty times as large as Belgium itself, although it has only about twice as many people.

During our travels in Belgium we have great difficulty in making ourselves understood. Many of the people do not understand English, and more than half of them speak Flemish, which is somewhat like a mixture of German and Dutch. The remainder speak French but they have many strange words, and it is only with the educated classes that we can talk freely. As far as language and many other things are concerned, the country has really two peoples—the Flemings and the Walloons. The Flemings live in the western part of Belgium. The Walloons, whose language is like French, live in the east. They are taller and stouter than the Flemings; they usually have a dark complexion, while that of the Flemings is fair. Both peoples are of the Roman Catholic faith, which is the chief religion of the country.

It takes us two hours to motor from Brussels to Antwerp, the chief port of Belgium. It is situated on the river Scheldt sixty miles from the sea, and its harbor is almost as large as that of London. We spend a morning in walking along its huge granite quays watching the gigantic cranes load and unload the vessels. Here is a steamer from New Orleans discharging cotton, and there is one out

of which they are lifting huge tusks of ivory. We see ships from Argentina filled with wheat and meat, and many from the other ports of Europe taking on and putting off goods.

Leaving the wharves, we visit the museums, and the great cathedral to see some of the famous paintings of Rubens, a native of Antwerp, and then take the train for Holland.

Describe the situation of Belgium: as to trade; as to danger of war. Compare its size with parts of the United States; with your own state. If your state were as thickly populated as Belgium, how many people would it have?

How can the country support such a large population?

What are the chief crops? How do they compare with some of our crops?

Make a trip through the country and tell what you see.

Why is Belgium a manufacturing country? Tell what you can about lace and how it is made. (See Carpenter's "How the World is Clothed.")

What is the capital of Belgium? What colony belongs to it? What languages are spoken in Belgium?

Can Belgium feed itself? Perhaps you can tell something about how the United States fed the country during the World War.

Why is Antwerp a great port? What famous painter lived there? Trace a shipment of elephant tusks from Boma at the mouth of the Congo to Antwerp; from Antwerp to New York.



XIX. A COUNTRY BELOW SEA LEVEL

HOW would you like to live in a land walled off from the ocean, where the fishes swimming outside are higher than your head and the keels of the ships are even with your second-story windows. That is the nature of a part of Holland, the country of the Dutch people, where

we are traveling to-day. Holland is often called the Netherlands. The word "nether" means low, and the Netherlands are lowlands. We shall see the fitness of the title as we go on with our journey.

Lying at the western end of the great lowland plain, this country was formed by the earth washings of the Alps and its foothills, brought down by the Rhine and its tributaries. The rivers have gradually built up the land, but much of it is so low that the river banks have been walled in to keep back the floods, and enormous dikes or embankments of wood, stone, and earth have been thrown up next the sand dunes along the seacoast to keep the ocean from rushing in and drowning the people.

Holland is a little larger than Maryland and less than two thirds of it is so high that no walls are needed. The rest is the result of a long fight between the Dutch and their enemy, the sea. The dikes are their fortifications made to keep out old Neptune. They have been centuries in reclaiming the land from the waters. Acre by acre, farm by farm, township by township, and county by county, they have wrested it from the ocean until now they have one of the richest little countries of Europe.

They accomplished it in this way. First they marked out a certain piece of overflowed land and put walls about it, and then by windmills pumped the water up into canals so that it flowed out to the ocean. After that they made ditches to drain the inclosed land, and when it became dry they cut it into fields, planted trees, and built houses. They then marked out another piece, and reclaimed that in the same way. They have had to keep the pumps going, and we shall see windmills everywhere tossing their huge arms about, raising the water; for it requires thousands of windmills and many steam pumps to keep Holland dry.



Dutch windmill. In the house grain is ground

We shall see how the fight with the ocean is still going on when we visit the dikes, and how the brave Dutch are ever victorious. They are getting more land every year and they are now building dikes to drain the Zuider Zee (zī'-dē'r zē), a piece of shallow water three fourths as large as the state of Rhode Island.

This seems to be even more wonderful as we go along the coast and see how the dikes are built. Most of them are as tall as a three-story house and so wide that two motor-cars could easily be driven upon them side by side without touching. There are so many dikes in Holland that if they could all be lifted up, placed end to end, and dropped upon our country, they would make a wall reaching from Boston clear across the Appalachian Mountains to Chicago and on to the Mississippi River, across Iowa to the Missouri, and hundreds of miles farther westward almost to Denver.

In making a dike the first thing is to get a foundation. Tall forest trees are trimmed and driven down deep into the sand in two rows wide apart facing the sea. These piles are faced with planks which are studded with an armor of flat-headed nails so that the teredo, the wood-eating sea worm, cannot get at them. Now huge blocks of granite or other stone, brought mostly on ships from Norway, are thrown in between the walls, earth is added, and gradually a rampart is built up. Some of the dikes are faced with masonry. Trees are planted on top and grass is sown there and on the sides that the roots may aid in binding the whole together.

The dikes are carefully guarded and in the winter they are watched day and night. During that season Neptune seems most angry at the loss of his territory and in his rage he drives the sea almost to the top of the dikes. He is always watching for a crack or a break, which he knows

he can quickly enlarge. The people appreciate the danger and have watchmen to warn them. At critical times the alarm bells are rung and every one hurries to help build the dike higher or to repair it. Notwithstanding all this, the ocean sometimes breaks through, as was the case about seventy years before Columbus discovered America, when a tidal wave swept over the country, flooding towns and villages and drowning thousands of people.

The canals of Holland are as wonderful as the dikes. There are several thousand miles of roads and railways, but the canals are so many that if joined together they would reach as far as from Paris to Constantinople. Some of them are ship waterways, and others little ditches dividing the fields like fences, the bridges with bars across them serving for gates. The largest canals connect the chief cities of Holland with the sea. Amsterdam has the North Sea Canal, a wide waterway, twenty-five feet deep and fifteen miles long. This canal, walled by dikes, extends through the country out to the sea, where there are locks and gates to keep out the ocean.

In many of the Dutch cities the canals form the principal streets, and in the country they serve as highways and roads. As we travel through Holland we see large ships apparently sailing through the meadows, their masts moving along above the tops of the trees which line the canals. Here is a boat loaded with wheat hauled along by a horse on the bank. There is one filled with vegetables, dragged onward by two men who bend over and pull at a rope attached to its mast, and farther on is another piled high with hay moved by a woman, a boy, and a dog, all harnessed together. The boy and the woman bend almost double, forcing the boat through the water by throwing their weight against the wide straps over their breasts to

which the towline is fastened. Both wear wooden shoes, and we cannot see how they can move along as they do. Other boats are being pushed onward with poles from the decks, and not a few are aided by sails.

Here and there we see children fishing and swimming in the canals, and now and then some boys in a boat. The canals form one of the chief winter playgrounds, when many a boy and girl goes to school on skates. Some of the winter games are played on skates, on which children race over the frozen canals on sleds with sails.

But what are those queer long-legged birds we see wading about through the ditches, poking their heads into the mud? They are storks; they are seeking the frogs, worms, and other things that live in the canals. The storks are great friends of the people, for they eat the reptiles which destroy the dikes and embankments. We see storks' nests in the trees and on the chimneys of the farmhouses, and frequently spy one of the huge birds resting on one leg on the roof. The storks stay in Holland only in summer. When cold weather comes they fly to the warm lands of the south.

Notice the windmills. They stand in rows along the canals, and we often count a hundred in sight. Nearly every farmer has one. Each mill consists of a tower with arms or sails from fifty to one hundred feet long. The tower is so large around that the first story is sometimes used as a house. Most of the windmills are used for pumping water from one level to another in draining the fields, but others grind grain and furnish the motive power for sawmills and factories. Holland is so flat that the winds from the ocean blow as regularly as at sea, and the mills can be relied upon to do their work every day. Some of the pumping is now being done by means of steam or gasoline engines.



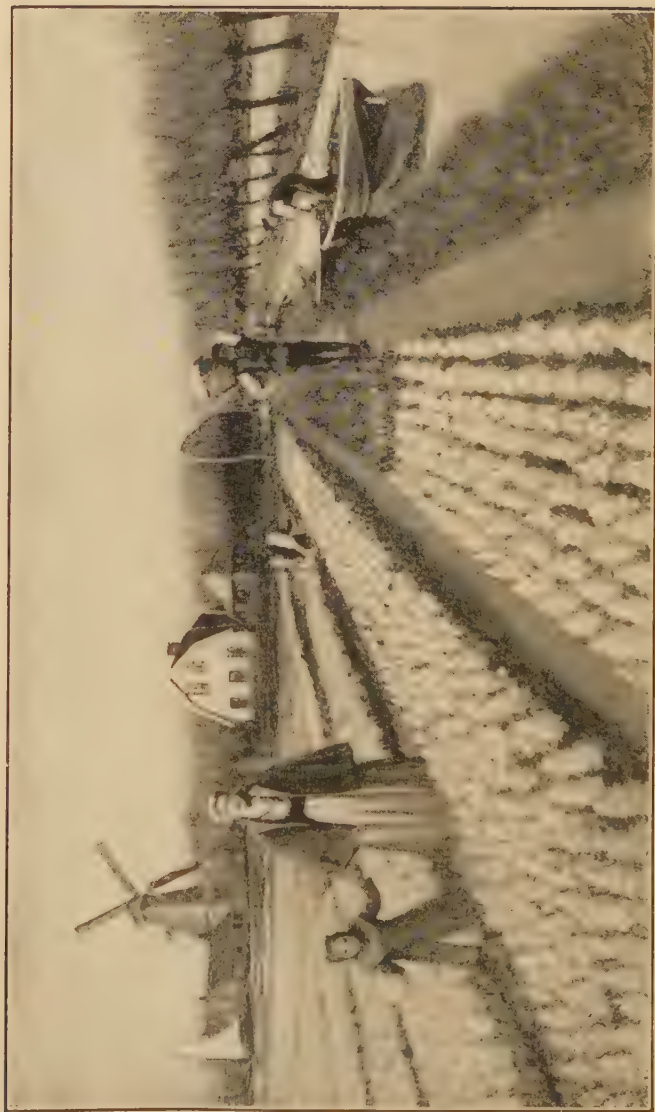
The Dutch are industrious. Almost every girl knows how to knit

XX. HOLLAND — FARMING — A THRIFTY PEOPLE

MANY of the highways of Holland run along the canals, and crossing back and forth over the country are railroads and electric and steam tramways. We travel mostly on the tramways, stopping off now to explore a quaint city or village, and now to chat with the farmers about their cattle and corn.

It is summer, but the fresh air from the sea keeps us delightfully cool. How beautiful it is! There are rows of tall willows along many of the canals, and the combination of water and land forms ever-changing pictures. We stand on the bridges and watch the black and white cattle grazing. How clean they are and how smooth! They look as though they had been curried. Some of them are eating from feeding boxes out in the fields. The grass grows luxuriantly, but the people know just what food will produce the most milk, so they add cottonseed oil and oil cake from our country. The Dutch are noted for their delicious butter and cheese, which they export so largely to England that Holland is sometimes called the dairy farm of Great Britain. Notice how careful they are of the cattle. Many of the cows are covered with blankets to keep off the flies. In the spring they have covers to protect them from the cold rains, and in the winter the animals are brought into the house and stabled under the same roof as the family. Holland has more than two million cattle, and one half of them are milk cows.

We see but few barns as we ride over the country. Lumber is scarce and all stone has to be imported, so the people find it cheaper to build one large house and give



Flower gardens near Haarlem. The bulbs are carried to market by canal and by rail

up a part of it to hay lofts and cattle than to have separate stables or sheds. Most of the houses have low walls and high roofs. The walls are whitewashed and the roofs are of red tile or gray thatch made so steep that the rain quickly runs off. Every house is kept clean inside and out, even the stable being frequently scrubbed. Most cows have their daily cold bath, and in some stables there is a ring in the rafter over each cow, to which her tail is tied while milking.

In the summer the cows stay in the fields, and the people go out there to milk. See, there is a girl milking now. Her sleeves are rolled up to her elbows and she sits on the heels of her wooden shoes as she squeezes out the white streams. There comes a man with a wagon full of copper cans. He has driven across the bridge into the pasture. The girl brings her pailful of milk and pours it into one of the cans, then goes on to milk more.

The Dutch are excellent farmers. We pass rich fields of wheat, rye, barley, and oats, and everywhere see potatoes and other vegetables growing. There are many fields of flax, and large tracts of sugar beets.

We spend some time in the great flower gardens about Haarlem, where they raise the finest roses, tulips, hyacinths, and gladioli, exporting the bulbs to all countries. More than a million dollars' worth are shipped away every year, including vast quantities to the United States. The Dutch are fond of flowers, and at about the time Boston was founded they went almost wild over tulips. Then Holland had tulip bulbs that actually sold for their weight in gold and some that brought much more, for it is said that one kind of bulb, known as the *Semper Augustus*, was worth an amount equal to fifteen hundred dollars of our money.

A story is told of a rich merchant who was showing one of these bulbs to a friend, when a sailor came in and announced that a cargo of silk had arrived. The merchant in his hurry laid down his *Semper Augustus*, and the sailor, thinking it an onion, picked it up and went away with it. When the merchant came back he was almost crazy at the loss of his treasure. He rushed through the town looking for the sailor, only to find that the man had sliced up the bulb to eat with his lunch before he had found it was a tulip instead of an onion.

Take a look at that crowd coming along on the opposite side of the canal. What good faces they have. Both men and women are rosy-cheeked and bright-eyed. It is a holiday and they wear their best clothes. The people of the cities and towns dress much the same as we do, but out here in the country they stick to the old styles of costume. The men wear short jackets and baggy black velvet trousers, held up by wide belts at the waist and fastened with silver buckles as big as the palm of your hand. They have on caps with wide brims and their long hair is cut straight off at the neck.

The women and girls wear short skirts, and full waists with short sleeves. We see what looks like silver or gold under their caps of coarse lace. They have horns of gold sticking out on each side of their heads. This headdress is a sort of helmet made of thin plates of gold or silver or imitations of those metals so that it fits the head like a cap, almost covering the hair. These gold helmets are prized, and they are kept in the family from one generation to another.

Now turn your eyes to the feet of the crowd. The shoes are of wood and they look very clumsy. They are the best footgear, however, for a damp country like Holland, where

the ground is often as soft as a sponge. These shoes are made in the country, and the cobbler has to do the work of a carpenter. There are also wooden shoe factories where such shoes are made for export to the United States



The quaint headdresses of the women of Holland are of great variety and other lands. Many are used in certain towns of Michigan, Illinois, Iowa, and Missouri, and even in cities like Chicago and Grand Rapids, where they are worn for some kinds of work.

Here comes a party of children! Their fathers and mothers are watching us from the bank, and the children have stopped for a moment to play. How they run over the ground in their thick wooden shoes! I am sure not one of us could run any faster. The smaller children hold on to the hands of their parents as they stand open-mouthed and stare at our boat. One rude boy sticks out his tongue at us as we go by.

There are few people better educated than the Dutch. They send the children to school and they have all the elements which make up really good men and good women. They have had to fight so hard to build up their country, and keep back the sea, that they have become strong and self-reliant. They have had to watch their dikes so carefully that they have grown cautious, and the long-continued work of keeping out the ocean has made them patient and industrious. Being on the sea, they early became a nation of traders. They have valuable colonial possessions in the East Indies and have grown rich by their thrift.

There is one thing for which the Dutch are especially noted. All travelers speak about it. Look around and see if you can guess what it is. Observe the fresh paint on the bridges and the new whitewash on the houses. Look down on the deck of our canal boat. See how it has been scoured until it is as white as snow. The Dutch are famous for keeping things clean; they are so neat that it is sometimes oppressive. We go on our tiptoes when we enter the houses, for the floors fairly shine and the front steps are washed every day. In our early morning walks through the city we have to go carefully to keep from being spattered with water. Bare-armed housemaids in white caps and short dresses are scrubbing the streets and the house fronts. Each girl has a mop on a long pole so

that she can reach every crack and corner. She first cleans the windows and walls and then scrubs off the doorsteps and pavement.

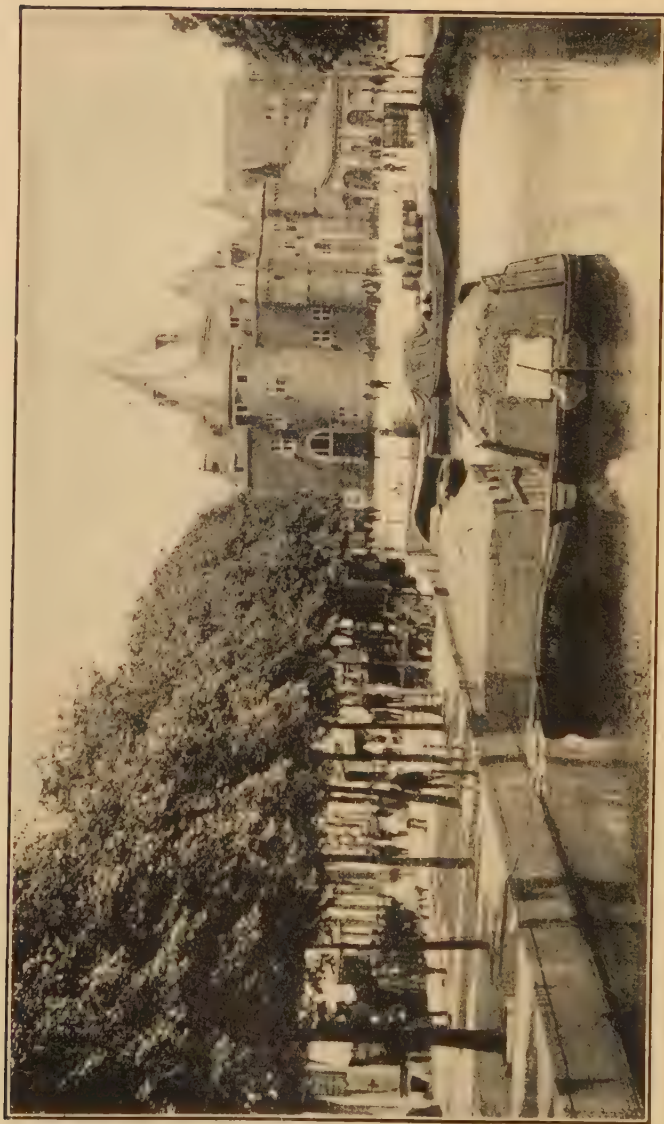
XXI. IN THE DUTCH CITIES

WE are surprised to find so many people in this little flat country. Holland is almost as thickly populated as Belgium. It is less than one fourth as large as Illinois, but it has more people. The farms are small, but are so well kept that a little bit of land will support a large family. About one third of the people live in towns. There are thirty towns of more than twenty thousand inhabitants, and several large cities. Amsterdam is nearly as large as Baltimore. Rotterdam, which is the chief seaport, is



Our travels through Holland

about the same size as Buffalo, and the capital, known as the Hague (hāg), is somewhat smaller than Newark, New Jersey. Amsterdam and Rotterdam have ship canals connecting them with the ocean, so that it is possible for big vessels to come into the cities to load and unload.



Let us stroll through Amsterdam, starting at the chief public square, with its bridges and canals

Almost all the Dutch towns are cut up by canals, and in some the waterways are so many that they largely take the place of streets, boats containing all kinds of goods being dragged through them. The city canals are walled with stone and the ways along their banks smoothly paved. In some places the houses are built close to the canals, so that the children can easily lean out of the windows and drop their fishing lines into the water; or, in the winter when everything is frozen, can put on their skates inside the house and glide off to school. In both city and country much of the winter travel and traffic of Holland is on the ice of the canals.

The Dutch cities have fine buildings; they have beautiful palaces, stores and banks, free libraries and museums, schools of all kinds, concert halls and theaters, and public gardens and parks. The people dwell in large houses, several families living in the same house.

Let us take a stroll through Amsterdam, and see for ourselves how a Dutch city looks. We start at the Dam, the chief public square. This is one of the great business centers. Here are the stock exchange, the king's palace, and many fine stores and hotels. We climb up the steps inside the palace tower, and when we come out at the top we find ourselves high above the biggest city of the Netherlands.

Look at the vast expanse of red-tiled roofs below us. They are ridge-shaped, and out of their sides little dormer windows faced with white curtains protrude. See the broad canals running in all directions through the red field. There are almost as many canals here as in Venice. They divide the city into islands, and three hundred bridges are required to connect the islands with one another. Notice the ships moving along through the streets; in the wider

canals the masts are above the roofs of the houses. Isn't it strange?

Now look beyond the great field of red roofs. See that wide silver sheet out there upon which the sun dances. That is the Zuider Zee, and that canal going through it, bearing a stately line of ships, is Amsterdam's chief highway to the ocean.

Turning around on the tower, we can see far out over the land. Beyond the red city are green fields striped with silvery canals. Those white specks on the landscape are cattle, and the little round towers, each flinging its arms about as though it were practicing some new exercises with Indian clubs, are windmills. How many villages there are scattered over the country! Those white cottages are the homes of the farmers.

We shall now climb down and walk through the Amsterdam streets. How tall the houses are and how sharp their peaked roofs! Most of them are of five and six stories. Many lean as though about to topple over into the canals or to fall on the shoulders of some of their neighbors across the way.

There is a new house just going up, and farther on foundations are being laid. We stop to see how they are working. The men are driving piles into the earth. The land beneath Amsterdam is as soft as mud and these streets and all the houses and buildings about us are standing on the tops of trees driven into the ground. This made Erasmus, a noted scholar of Rotterdam, say that "the people of Amsterdam live like storks, on the tree tops."

Sometimes the piles settle unevenly, causing the buildings to lean. They seldom fall down, however, so we may walk on and feel safe. Nevertheless, we must be careful at the bridges; many of them are moved about now and then or



How tall the houses are and how sharp their red-tiled roofs!

raised to let the boats through, and a stray step might drop us into the water.

Take another look at the houses! Observe the little mirrors set at right angles with the walls just outside each window. Can it be that the people lean out for fresh air while making their toilets? No! Those mirrors are to let the owners learn what is going on in the street without looking out. They are so fixed that a woman inside the house can see all who pass by. She can see who a caller is when he rings the door bell, and can watch her children coming home from school when they are still blocks away.

Let us enter one of the stores. The price marks are in Dutch, and it takes some time for us to tell just what things cost. The money is in guildens and cents. A gulden is a silver coin a little larger than our twenty-five cent piece. It is worth one hundred Dutch cents or forty cents of our money. There are half guildens, quarter guildens, tenth guildens, and twentieth guildens, each of which has its own name. The quarter gulden is called a *kwartje* (kwärt'yě), the tenth a *dubbeltje*, and the twentieth a *stuyver* (stī'vēr), the last being worth about two cents of our money. There are copper cents and half-cents, each worth respectively two fifths and one fifth of an American cent. There is also a two and one half gulden piece, the size of our silver dollar, and gold pieces that are worth ten guildens, or four dollars of our money.

We spend a ten gulden piece in making purchases, and in change for our gold are given a handful of *kwartjes*, *dubbeltjes*, and *stuyvers*, and also a good lot of Dutch cents. We really seem to have more money now than when we came in and we feel generous when we give the first beggar we meet ten copper coins, although altogether they are not worth more than two cents.

Fortunately our merchant speaks English and we have no trouble in making ourselves understood. We find the Dutch language hard to pronounce but soon learn a few phrases by which we are able to get many things that we want.

For instance, when one goes into a restaurant he may say, "Kellner, wat heb je to eten?" which means, "Waiter, what have you to eat?" and after looking over the bill of fare order as follows: "Breng mij gebraden rundvleesch, brood, boter, en koffie." ("Bring me roast beef, bread, butter, and coffee.")

When one asks the way to the station he says: "Wat is de weg naar de Spoor?" and after the man has shown him he may voice his gratitude by "Ik dank U, mijnheer."

The Dutch language is closely related to the Flemish, spoken in parts of Belgium. It was in common use in New York until that city was taken over by the English, and there are some Dutch words in our language to-day.

In traveling through Holland we must not forget that we are in one of the lands of our forefathers. It was from Amsterdam in 1609 that Henry Hudson sailed in the *Half Moon*, a vessel of eighty tons, across the Atlantic to the mouth of the Hudson River, and went as far north as Albany, trying to find a passage to the Pacific; and it was the Dutch who had the first colony on Manhattan Island where the heart of New York City now is. They bought the island of the Indians for twenty-four dollars' worth of goods, consisting of cloth, beads, hatchets, and other such things, and founded the first settlement in that part of the country.

Moreover, it was at Delfshaven, a little town on the Maas River two miles from Rotterdam, that Miles Standish, John Alden, Priscilla, and others of the Pilgrims who crossed the Atlantic in the *Mayflower* lived for a time before they

went back to England and started out on the voyage that ended at Plymouth Rock. The church where the Pilgrims worshiped still stands, and has been in use from that



The church at Delfshaven, where the Pilgrims worshiped

time to this day. It faces the canal just below a draw-bridge. We go inside and sit down in the pews. It is cold, but under each seat we find a little square box with

auger holes in the top. These boxes are the only heating arrangement of the church. Before service the sexton puts into each a little pot of glowing charcoal, and the people, putting their feet on top of the boxes, keep them warm during the service.



XXII. COMMERCIAL AND MANUFACTURING HOLLAND

AS we continue our travels in Holland we see how busy and prosperous the people everywhere are and wonder how such a small country can support such a large population. One answer is that the Dutch are a great commercial nation. They have thousands of vessels moving back and forth over the sea carrying goods from one country to another and especially to and from Holland. They have thousands of craft of one kind or another engaged in fishing, and their ships bring in the raw materials used for a large manufacturing industry. From the United States they import raw cotton, coal oil, gasoline, grain, flour, and minerals; and they export butter and cheese, as well as coffee, tobacco, cacao, indigo, nutmegs, pepper, and other spices.

The latter exports all come from the tropics, and we ask how Holland, which lies in the temperate zone, can have such a trade. It comes from the Dutch colonies in the East and West Indies. These people have a large colonial empire. They own more than sixty times as much land outside Holland as in Holland itself, and some of this land produces the exports we have mentioned. The coffee of Java and Sumatra is among the best of the world, and there

is a vast deal of cacao and sugar grown in those islands. Some of the largest tin mines of the world are in the Dutch East Indies, and Java produces much of the cinchona or quinine used by mankind. All these things come to Amsterdam or Rotterdam and are shipped from there to other parts of the world. One third of the imports of Holland comes from her colonies, and are exported to other places for sale.

The chief trade of Holland is with western Europe. The country is one of the principal gateways to this great industrial section, and manufactured goods and raw materials from everywhere come to Amsterdam and Rotterdam, whence they are carried on the river boats and barges into the interior. Rotterdam is the more important port. It is the gate to the Rhine and the thickly populated country tributary to it. American goods are landed there and taken up the river to different parts of Germany, Switzerland, and France. There are canals connecting the Rhine with the Seine and the Elbe, and the boats take advantage of these to go farther inland. One can travel by boat from Rotterdam up the Rhine and by canal to Paris; and he may reach Vienna by way of the Rhine, the Main, and the canal that has been cut from the Main to the Danube, and go on thence to the Black Sea.

The Dutch have no coal fields of value, and the country is so flat that there are no waterfalls to operate electric power for manufacturing. Nevertheless, there are some large factories and mills, run by means of the cheap coal they bring in by water from England and elsewhere. The Dutch make excellent cloth of all kinds. They import quantities of raw silk and wool and a great deal of our cotton. They are noted for making fine china, and for many kinds of machinery.

There is one thing that the Dutch do better than any other people. I wonder if you can guess what it is. You need not look in Holland for the reason, for it has nothing to do with anything raised here. It is connected with mines. Is it composed of gold, iron, silver, copper, or zinc? No, although they may furnish tools to aid in the work. It has to do with the diamond. Amsterdam is the chief place for cutting and polishing this precious stone so that it will be of the most value.

As diamonds come from the mines they are rough and often have flaws that lessen their brilliancy. In 1456 a Belgian jeweler, named Berghem, discovered that rubbing one diamond over another wore off a little of each, and that if he took the powder made by rubbing he could use it to smooth diamonds. The diamond, you know, is the hardest of stones. It is so hard that only a diamond will cut it, and only diamond dust can be used in polishing diamonds.

After Berghem made this discovery jewelers began to study how to make diamonds more beautiful. The Dutch engaged in the business and became so proficient that they now polish diamonds better than any one else. They know just how to split them so as to remove the flaws and how to grind them into prismatic shapes so that they will blaze like fire under the light. There are more than sixty factories for dressing diamonds in Amsterdam, and some of them employ hundreds of hands, including many women and girls.

We enter one of the diamond-cutting establishments and are first shown how diamonds are split. They can be split at the flaws; and, by using one sharp diamond, cemented into a handle, as a knife, a rough diamond can be divided into pieces, each of which is pure or without

flaws. The work must be done carefully, for a wrong stroke might easily destroy a stone worth thousands of dollars.

The next operation is cutting the diamond into shape. This is done by rubbing it with diamonds which have been cemented into handles, and by pressing it on a revolving plate upon which diamond dust mixed with oil has been spread. The plate, moved by steam, makes about fifteen hundred revolutions a minute, and the little grains of diamond dust gradually wear away the diamond until it assumes the prismatic form it has when set into jewelry.

Notice how the polishers work and how they save every grain of the stone. The rubbing is all done over metal boxes into which the dust falls. It is kept to finish other diamonds, or may be spread upon a steel wire to make diamond saws to cut and shape others of these hardest of stones. Many of the Amsterdam diamond cutters have emigrated to New York.

Leaving the diamond factory, we take the cars for Delft, where a famous china is made from the clay beds near by, and thence go to the Hague, the capital of Holland. It is a beautiful city of several hundred thousand people, situated three miles from the shore of the North Sea and thirty-two miles from Amsterdam. It has wide streets paved with brick and lined with shade trees with seats under them. There are many canals and vatlike ponds here and there in the heart of the city.

We visit the museum and great picture galleries and then go to the palace of the Queen and the houses of Parliament. The Dutch government is a limited monarchy. It has a queen and a congress, called the States-General. The latter is elected by the people, so that in reality the Dutch are almost as free as we are.

How was most of Holland formed, and how is it protected from the sea? Describe the dikes. Make a dike on the sand table.

Why can Holland have so many canals? Why are windmills used for motive power?

What advantages has Holland for commerce? What are the two chief ports? Describe them. How far is Rotterdam from New York? What do we sell to Holland and what does she sell to us?

What people inhabit Holland? To what race do they belong? What language do they speak?

What important city of America did they found? Mention a historic building in Holland especially interesting to Americans. What important American river was discovered by a Dutchman?

What kind of soil does a country like Holland have? What are the principal crops? What is the chief farming industry? Why?

Compare the flower industry of Holland with the flower industry of France.

Locate the capital of Holland. Describe the government.

For what industry is Amsterdam noted? Describe it. Tell all you can about diamonds. (See Carpenter's "How the World is Clothed," and Carpenter's "Africa.")

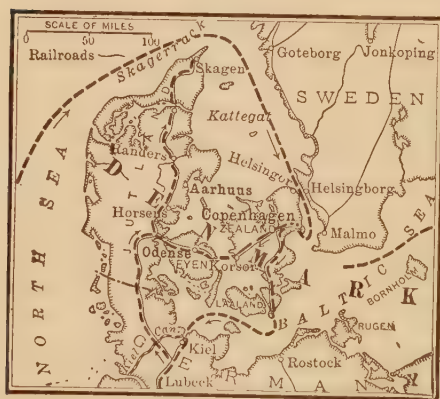
Locate the Dutch colonies. What are their chief exports? What drug do we get from Java? (See Carpenter's "Australia and Islands of the Sea.") Give the route of a shipload of coffee from Batavia, Java, to Amsterdam; of a cargo of sugar to New York via San Francisco.



XXIII. THE LAND OF THE DANES

WE decide to visit Denmark, Sweden, and Norway before going to Germany. We are tired of traveling by land, and therefore take ship at Rotterdam for Copenhagen. Our steamer carries us out into the North Sea, through the Skager-Rak (sgäg'ēr-råk) and the Kattegat into the long narrow sound that separates the Danish Island of Seeland from Sweden, and forms the principal entrance to the Baltic.

Denmark has been called "The Keeper of the Baltic." It consists of the northern part of the peninsula of Jutland, and the islands to the east, with some smaller islands outside.



Our route through Denmark

It is a country not more than twice as big as the state of New Jersey, but it almost blocks the entrance to this vast inland sea.

The sound, where we now are, is only seventy miles long, and a little more than a mile wide at its narrowest part, but nevertheless, it is the chief gate

through which the ships that carry on the commerce of Scandinavia, north Germany, and Russia must pass on their way to and from the ocean. There is another passage, but the sound is by far the safer and better.

How much shipping there is all about us! There are Russian vessels from Petrograd; German vessels from Lübeck, Stettin (shtët-tën'), and Kiel; Danish vessels from all ports, and vessels from New York, London, and Havre. Now we are passing Elsinore, the little city which was the scene of Shakespeare's play of "Hamlet," and where all ships going through the strait had to stop and pay toll. The Danes once owned not only the island of Seeland but the part of Sweden on the opposite coast. They thus controlled this gate into the Baltic, and made every ship which passed through pay well for the privilege. It was largely

from this system of tolls that Copenhagen became a great city. It has an excellent harbor, and the ships stopped there on their way through.

For this reason many men came to Copenhagen to buy and sell goods, and the Danes sent their ships out from here to trade with all parts of the world. Later on, Denmark entered into the treaties which made the Sound free to all nations. Copenhagen has become a free port, that is, goods can be exchanged here without paying duty. The city has two miles of quays at which the largest ocean steamers can land, and more than thirty-five thousand vessels of one kind or another come in and go out every year. The Danes are noted as sailors. They command ships almost everywhere, and we shall seldom enter a harbor without finding one or more Danish captains in charge of the vessels within it.

The Danes have a large trade with the United States. They import much of our cotton, petroleum, and corn, as well as cottonseed meal, oil cake, and grain of one kind or another, and we buy of them hides, bacon, porcelain, and other manufactures. The chief exports of Denmark go to the United Kingdom, Germany, Sweden, and Russia.

We find the harbor filled with vessels as we steam in by the great forts and come to the wharves. We push our way past the workmen loading and unloading ships, and then, having sent our baggage to the hotel, start out for a walk.

How clean the streets are! Every one has to take care of the pavement and roadway in front of his house, and the town is well kept. As we go on we cross bridge after bridge. Copenhagen has so many canals that it reminds us of Amsterdam. There are street cars and automobiles moving in every direction. Motor trucks are carrying



Danish school girls

freight from the docks, and the business streets are crowded with people. The buildings are mostly of stone or light-colored brick with tiled roofs.

Notice the stores. Many are on the second floor; we have to go upstairs to do much of our shopping. We pass large churches and other big buildings, and then visit the Palace Square, where the king lives. We spend an hour in the Palace of Christiansborg, where the Danish Parliament meets. The Danes have a Congress much like ours. It is called the Rigsdag (rīks'tāk). They have a king, but the Rigsdag, which is elected by the people, makes the laws, fixes the taxes, and decides how the money from the taxes shall be spent. The Rigsdag is composed of two houses. The upper is called the Landsting; it is much like our Senate. The lower is called the Folkething and resembles our House of Representatives. Every man and woman over twenty-five years of age has the right to vote for the members of the Folkething. Most of the members of the Landsting are chosen by electors who are elected by voters over thirty-five years of age, but nineteen of them are chosen by vote of the members of the Landsting.

Greenland is now Denmark's only colony, the Danish West Indies having been sold to the United States in 1916. The price paid was twenty-five million dollars, and we bought them in order to protect one of the routes to the Panama Canal. Greenland is the largest island of the world, but most of it is covered with ice a half mile thick, and it has only a few thousand inhabitants, including the Eskimos. Iceland, which until a short time ago was a colony of Denmark, is now a separate kingdom, with the same king as Denmark. It is about as large as Ohio, but its people are few. They live by fishing and raising sheep, cattle, and horses.



Statue of Hans Christian Andersen

Leaving the palace, we stroll about through the beautiful parks for which Copenhagen is noted, and then visit the Thorwaldsen Museum and take a photograph of the bronze statue of Hans Christian Andersen. You may not have heard of Thorwaldsen, the great Danish sculptor, but every boy and girl ought to know of Hans Christian Andersen, for he composed some of the most beautiful stories ever written for children. Among them are "The Tin Soldier," "The Ugly Duckling," "The Match Girl," and "How Little Tuck Learned His Geography Lesson in His Sleep."

Hans Christian Andersen was born in the Danish town of Odense (ō'dĕn-sā). He was the son of a poor shoemaker, and his mother wanted to make him a tailor. But Hans was fond of books, and he told her he would rather go away and try to become famous by writing. He had only about five dollars when he arrived in Copenhagen, but he worked and studied, and after many misfortunes succeeded in getting a good education. When his books were published, they were liked so well that kings and princes invited him to their palaces to read his stories to them. He traveled much, but his last days were spent in Copenhagen. Here all the children knew him. When they met him the boys took off their hats and the girls bowed. He was a kind old man and often amused children who were sick. After his death, in 1875, the people erected this statue. On one side of the pedestal is engraved a picture from "The Ugly Duckling," and on another side a little child riding on the back of a stork.

Before leaving Denmark, we take a railroad train for a rapid run over the country. It is nearly all flat and the greater part of it is pasture. Much of the land is sandy and poor but there are rich crops of wheat, oats, and rye in

some places, and now and then a patch of potatoes. We see a great many beech trees, and the roads are frequently lined with them.

The pastures, however, are more important than anything else. How well the grass grows! See the fat cattle feeding upon it! There are many dairies, and we stop to watch the men and women making butter and cheese. Denmark is one of the best dairy countries of the world. It annually exports to England alone more than thirty million dollars' worth of butter, and sends butter in tin cans to all out-of-the-way parts of the world, where the people themselves do not make butter. It ships millions of eggs and a great deal of bacon and other meat.

Now we are passing through a small Danish town. It has but one long street, bordered by quaint, one-story houses with white walls and roofs of red tiles. The people are healthy and happy. Notice their rosy cheeks, their light hair, and blue eyes! They are comfortably dressed and seem well-to-do.

The Danes are noted for their thrift; they are industrious and economical, and most of them have money in the savings banks, which are to be found in all the towns. We meet schoolboys everywhere. The Danes are well educated. All children from the age of seven to fourteen are compelled to go to school and there are but few men or women who cannot read and write.

But how dark it is growing! We can see only a short distance outside the car windows. The wind has blown the fog in from the ocean, and the country about is enveloped in mist. Denmark is so low and so surrounded by seas that it is often covered with fog, and there are also sandstorms which are very unpleasant.

Why is Denmark called "The Keeper of the Baltic"?

Locate Copenhagen and tell why it has become a great city. How far is it from Petrograd? From New York? From Paris? How long will it take to go to each place?

Describe the government of Denmark. Locate its only colony. With what part of the United States does it compare?

What famous author was born in Denmark? Can you relate one of his fairy stories?

What do we sell to Denmark? What does it sell to us?

What islands did we buy of Denmark in 1917? Locate them. Give the chief reason for the purchase.



XXIV. THE SCANDINAVIAN PENINSULA

THE Scandinavian Peninsula, which includes the two great countries of Norway and Sweden, is often called the "Land of the Midnight Sun," because in its northernmost part in summer the daylight lasts for twenty-four hours, and even at midnight the sun can be seen. In winter the land is in almost continuous darkness. This is true only of the far north, although the whole of the peninsula is so near the pole that its summer days are much longer and its winter days much shorter than ours. Even as far south as Oslo and Stockholm in summer one can read after ten o'clock at night out of doors, and we shall have to hang our traveling rugs over the windows to darken the rooms so that we can sleep.

We begin our journeys with a trip to the far north, for we wish to see for ourselves how the sun looks at midnight. This will give us some idea of Norway and the character of Scandinavia.

The Scandinavian Peninsula is more than four times as large as New England; Norway is as large as New Mexico,



and Sweden is as large as New Mexico and New York combined. The whole peninsula is so long that if it were laid upon the United States it would reach from the Gulf of Mexico almost to our Canadian boundary, and in some places it is as wide as from New York to Pittsburgh. This great body of land rises abruptly out of the Atlantic Ocean and slopes toward the east and south to the Gulf of Bothnia and the Baltic Sea. It is rugged and mountainous in the extreme. In the north there are snow-clad peaks and enormous glaciers. Farther south the mountains uphold high wooded plateaus with many fiords running through them. Some of the mountains are steep, and countless waterfalls dash down their sides. The southern part is the most cultivated; it has most of the industries and by far the most people.

The streams of Scandinavia are one of the most valuable features of the country. Their fall is so great that Norway and Sweden are said to possess more water power than any of the other countries of Europe. The power that can be developed in Norway is equal to more than twice that of the water that pours over Niagara Falls, and the power of Sweden is equal to six million horse power. Many industries are operated by these waterfalls. In some places they are used to extract nitrogen from the air, and in others they run factories for making the calcium carbide which is so important to the steel industry and to certain artificial light plants. Water power used in this way is sometimes called "white coal." Norway and Sweden have but little black coal, but their white coal is exceedingly valuable.

But we shall see this better as we go on with our travels. We steam slowly northward along the west coast of Norway, stopping now and then for a trip into the interior by means of the fiords. The fiords are enormous gaps, or chasms,

in the mountain wall which forms the coast. Some of them extend for a hundred miles into the land. There are so many of them that if the coast line of the peninsula were stretched out it would reach more than halfway round the world. These fiords form ocean avenues by which ships can steam far into the country. They are of value in commerce and trade, and nearly all the towns and villages have been built upon them.

Now we have entered one of the fiords. We are sailing into a great cleft in the mountain wall and up a mighty gorge into the heart of the land. The walls, covered with trees, moss, and bushes, rise so high above us that the gorge seems to be roofed with the sky. We lean over the side of the boat and look down. The water is as clear as crystal, and we can see the stones on the bottom with the fishes swimming about far below us.

Now we have come farther inland. We have lost sight of the ocean and seem to be traveling through a mountain-walled canyon. Hear that noise at the front! Warn the pilot to guide the boat more to the left! The noise is made by that great volume of water dashing down from the cliff on the right. That is a mountain stream which is taking its last plunge on its way to the sea. Now we are almost under it. It looks like a torrent falling out of the sky. Now we have gone past. The sun shines through the spray; it turns it to myriads of diamonds and paints rainbows high above the surface of the water.

As we go on up the fiord the height of the walls decreases. There are little towns and villages along the banks, and now and then a small city. The houses are like wooden boxes on foundations of stone. Their walls are painted red, white, gray, or yellow. They look very pretty against the background of green.

Now we are back again on the ocean and on our way to the north. How smooth the sea is! This is because of the islands which line the coast; they form a breakwater against the storms, and give the sailors a quiet ocean channel from one end of their country to the other. Is it any wonder that with these fiords, this long seacoast, and this easy-sailing coast channel, the Norwegians should have many seamen? They, as well as the Swedes, have an enormous number of ships. They do much trading and fishing, and their merchant vessels go to all parts of the world.

We stay for a day at Nidaros (nĭ-dă'rōs) formerly named Trondhjem (trōn'yēm). It is on a great fiord, and we are surprised to find, away up here at the north, a city of fifty thousand people, with wide streets, good pavements, and substantial buildings. It also has shipbuilding yards, lumber mills, and fish-packing houses. We visit the Cathedral in which the Norwegian kings are crowned. It is one of the oldest in Europe and is built of blue-colored slate, parts of it beautifully carved.

Nidaros is the third city of Norway. With Narvik, also in Norway, Murmansk and Archangel in Russia, and Fairbanks, Alaska, Nidaros is among the northernmost railroad towns of the world. Connected with Oslo by a railway three hundred and fifty miles long, its harbor is open all the year round, although it is several hundred miles farther north than northern Labrador and nearer the North Pole than the mouth of the Yukon River in Alaska.

Both Labrador and the Yukon are covered with ice and snow for the six or eight months of the winter. Why is it that Nidaros in a higher latitude does not freeze too? It is because of the westerly winds which are kept warm by the Gulf Stream. The Gulf Stream is a great ocean current which flows from the tropics, northward along our

Atlantic coast, and then spreads out over the north Atlantic, washing the northwest coast of this continent. The winds are warmed by it, and give the British Isles a temperate climate. They flood the coast of Norway with warm air, keeping its harbors free of ice during the winter, while the harbors of Eastern Scandinavia on the Baltic Sea and the Gulf of Bothnia are frozen. Were it not for this water-warmed westerly wind, the greater part of Norway would be as cold as Labrador, the fiords would be blocked with ice, and the coast would be cold and barren. The people owe their food, their commerce, and their very lives to these winds.

Norway is in many ways like Alaska. Its climate along the coast is similar to that of southeastern Alaska, which has the winds from the warm currents of the Pacific Ocean to drive out the frost. Southeastern Alaska has fiords like those of Norway, and its scenery is even more grand.

Sweden is colder than Norway, although both countries are covered with snow for months at a time. The winter life is delightful. Then the people go about on sleds and skates, and travel from one place to another on snowshoes or skis. They have skis and toboggan parties, and enjoy themselves coasting down the steep hills.

Leaving Nidaros we sail northward inside the islands by snow-clad mountains upon the sides of which great glaciers hang. We cross the Arctic Circle, and then stay for a day at Tromsö (tröm'sû) to see the village of Laplanders near by.

Most of the Scandinavians belong to the white race. They are Teutons, and the peninsula is supposed to be the true home of the Teutonic family, which is the same family to which the Germans, the Danes, and most of the English



Laplanders

belong. There are, however, some Laplanders who live in the northern part of the country.

Lapland is the general term used to show where the Laplanders live. It is not a fixed political district, but extends through northern Scandinavia, Finland, and Russia, running from the Arctic Ocean some distance southward. There are only a few thousand Lapps in the world and three fourths of them live in Scandinavia.

Near Tromsö some of the Lapps dwell in tents made of skins stretched upon poles, with a hole in the top to let the smoke go out. Others have huts of stone and earth, but everything is of the rudest description.

The people gather round us as we walk through their little town. How dirty they are and how small! They look like dwarfs. The men are about five feet tall and the women about six inches shorter. They are dressed in reindeer skins with the fur on the inside. They belong to the yellow race, and they came here long ago from Asia. Their complexions are almost as yellow as their leather clothing, their skins having been darkened by the smoke of their tents. They look a little like the Eskimos of Alaska. They are nimble and lively.

The little Lapps look and dress just like their parents. All have high cheek bones, flat noses, and large mouths. Their eyes are small and black, and often twinkling with laughter. They are good natured, and for a few coppers will allow themselves to be photographed very often.

We see few reindeer about Tromsö. They are found farther back in the country, where nearly every Lapp has his own herd, and where the people live largely upon reindeer meat and reindeer milk. They milk the reindeer just as we milk our cows, but they can keep milk better than we can, with all our ice chests and spring houses. It is so cold

in the winter that the milk is frozen into hard blocks, and can then be thawed out as they need it.

Many of the Laplanders have no settled habitation. The vegetation is scanty in these northern latitudes and it takes quite a large space to support one reindeer. Therefore, the people drive their deer from place to place to find pasture. In traveling, many of them use reindeer sledges to carry their tents and other belongings. The reindeer can travel fast, and take the place of horses in all the lands along the Arctic coast of Europe.



XXV. WHERE THE SUN SHINES AT MIDNIGHT

IT is early morning when we cast anchor in the harbor of Hammerfest, the northernmost town of the world. Hammerfest contains several thousand people, who dwell in wooden one- and two-story houses on the edge of the sea. It has a telegraph station and weekly newspapers. We eat our dinner at a good hotel and find that people live well here. The sun is above the horizon day and night from the thirteenth of May to the twenty-ninth of July, and the long days of the summer make the plants grow rapidly, so that they mature in much less time than ours do. For about three months in the winter there is no sun at all, but the town is lighted by electricity from the waterfalls near by. The chief occupations are walrus hunting and the making of codliver oil.

Many whaling and fishing vessels go from Hammerfest to the Polar seas, and there is a large export of fish. The Norwegians are famous as fishermen. They catch many millions of codfish every year, and at times sell to other

countries hundreds of millions of pounds of salt cod. They sell cod-liver oil by the thousands of barrels, and pack vast quantities of herring, mackerel, and other fish.

Now we have left Hammerfest and are again on our way to the north. In seven hours we shall be at the North



A mountain glacier in Norway

Cape. We crossed the Arctic Circle some days ago and are now sailing through the Arctic Ocean. The water is clear and of a beautiful blue. It is not cold, for we are still

floating upon the warm drift of the Gulf Stream, although now and then we see an iceberg, and are always in sight of the glaciers on the mountains of Norway. How fresh the air is, and how pure! The winds blow continually, so that we almost have to fight our way from the stern of the boat to the prow.

Now we are steaming amongst islands, with birds in great flocks soaring about over our heads. There are scores of sea gulls following our steamer, and hundreds of black and white eider ducks flying over the islands. The ducks are of value for their feathers, which are so soft and light that they make excellent wadding for quilts. They are used also for trimming cloaks and for collars, muffs, wraps, and other garments. The ducks build nests of twigs and rushes, and line them with soft feathers which they pluck from their own breasts. Our captain tells us that many people make their living by gathering the feathers. When the hunters find a nest, they are careful not to destroy it. They merely take out the feather lining, after which the ducks will line it once more. When they have been robbed twice they will slip off and build a nest somewhere else.

As we go on among the islands, we pass rocks half submerged by the sea. There is one not far away at the right! It apparently has a geyser upon it, for it is spouting water high into the air. See, it is moving! Take your field glass and look again. That is not an island at all. It is a whale. There are many whales in these waters, and ships hunt them for their oil and whalebone. There, the great whale has dived, and we see him no more!

We sail on and on, until at last, rounding a high, bleak, point of rocks, we enter the harbor of the North Cape, and drop our anchor in a little bay surrounded by mountains, on some of which snow can be seen. We throw out



North Cape, showing the bluff which we climb to see the mid-
night sun

our lines, and amuse ourselves fishing while we wait to see the sun shining at midnight.

How slowly the time goes, and how strange is this turning of night into day! The sun was already high in the heavens at three A.M. when we left Hammerfest; and when we think of all we have seen since then the day seems a week long, and it is hours yet till midnight. We look again and again at our watches, observing that the sun still stands far above the horizon. It is well up at 10:30 P.M., when we leave the ship for the shore. We have decided to climb the bluff which overhangs the harbor, for our midnight view of the King of the Heavens. The sailors let down a boat, and we row to the land and walk along a rugged path among the rocks to the foot of the bluff. The way from here on is so steep that we are glad to use the thick rope which has been passed through iron rings fastened by staples into the rock in order that travelers may help themselves up. The bluff is over nine hundred feet high; step by step we climb up its bleak sides to the top, and there take our stand beside the brown monument erected when Oscar II, King of Sweden, visited the Cape.

As we look at the glorious scenes all about us, we stop a moment and try to realize where we are. We are almost as far north as man ever gets, if we except those who have risked their lives trying to find the North Pole. We are only a little south of Cape Nordkyn, the northernmost point of the continent of Europe, which we can see forty-four miles to the east. Right in front of us is the track of the steamers on their way to Kola and Archangel in Russia. To the north is the region of icebergs, Eskimos, and polar bears. To our right and to our left extends on and on a vast watery waste dotted here and there by icy islands where Jack Frost reigns supreme.

And it is wonderfully beautiful. We gaze over the Arctic Ocean, which looks not unlike the Atlantic from the rocks of



Our route through Scandinavia

first sleep after a long day of more than twenty-four hours.



XXVI. TRAVELS IN NORWAY AND SWEDEN

WE have left our steamer at Nidaros and are going through Norway to Oslo by rail. The distance is less than four hundred miles, but we spend several

New England. We forget the time, till we see a rocket shooting up from our ship far below. That is the signal for us to sail. We look at our watches, and lo! it is midnight. The sun is as far down as it will go these twenty-four hours, and as near the horizon as it will be for months to come.

An hour later we are again in our cabins, darkened by hanging our coats over the portholes, ready to take our

days on the journey, for we wish to study the country. We leave the train frequently, and ride in carriages from one town to another. The carriages are little carts not unlike our American sulkies, save that each has a seat behind for the boy or girl whom the owner sends along to bring it back home. Our carriages are drawn by Norwegian ponies. They are stocky little cream-colored beasts with long tails and short manes. They are so patient and gentle that we wish we could send them home to America. They will travel all day without tiring. Sometimes one goes too fast for our comfort. We pull on the reins and cry "whoa!" but the pony trots faster than ever. At last, in despair, we look back at the boy riding behind. He laughs, and then makes a noise like the loud purring of a cat, saying "pur-r-r." The pony stops instantly, and we thus learn that pur-r-r means whoa in Norway.

Much of our travel is through the forests for which Norway and Sweden are noted. Scandinavia has long been one of the chief lumber regions of Europe. In the northern part of the peninsula there are vast tracts of pine and fir, and in the south many beeches, elms, and other hard woods. Some of the best timber of Europe comes from Scandinavia, Sweden often exporting as much as one hundred million dollars' worth of forest products in one year. A great deal is exported as logs, some as window sashes and doors, much as boards, and not a little split up into matches. Swedish matches are used all over the world. So many are sold every year that, if they were all loaded into two-horse wagons at a ton to the wagon, it would take a line of teams more than a hundred miles long to carry them all. Sweden leads the countries of Europe in its export of things that come from the woods.

Let us stop our carriages and think for a moment of the

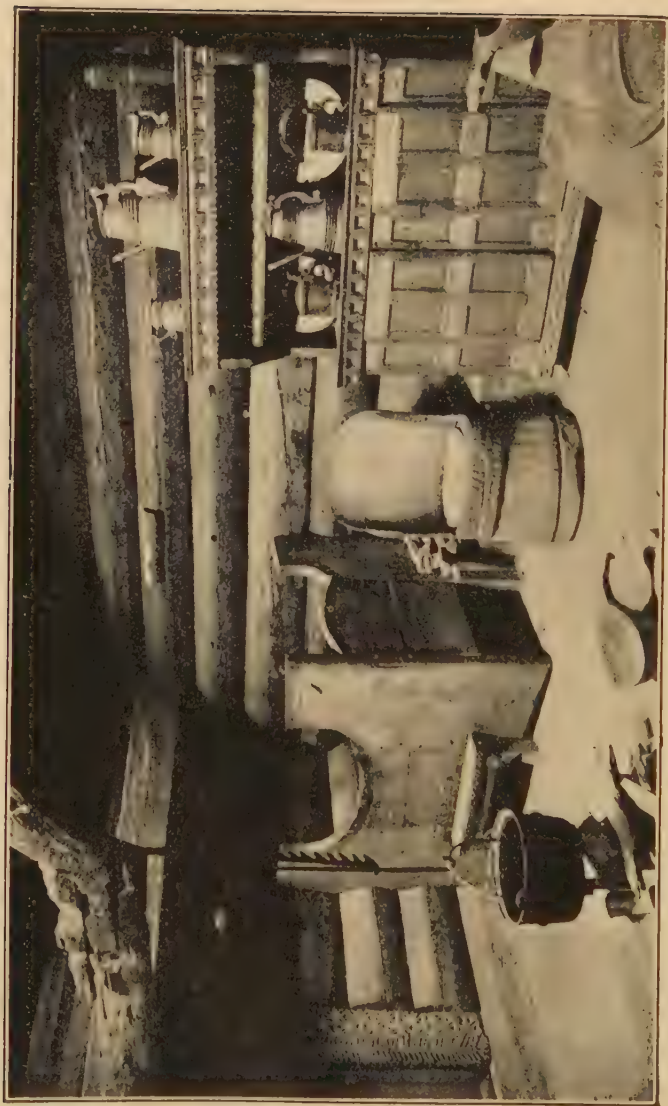


Norwegian woman in peasant costume

possible future of the dense forest through which we are now passing. There is a great pine which has been marked for cutting! Within a short time it will start on its travels to Holland to serve as a pile to support one of the buildings of Amsterdam or Rotterdam. That tall tree beside it may form the mast of an English steamship which will carry goods to South Africa, and some of the others near by may be cut up into posts of from three to nine feet in length, to prop up the roofs of the tunnels in the coal mines of Belgium. Farther on are some destined to be ground into pulp to make printing paper; they may come before us again in the newspapers which, a few months from now, we shall be reading at breakfast in Vienna or Rome.

So musing, we go on through the woods and come out into cleared lands, where men, women, and children are cutting hay and curing it for winter. How different it is from the haying scenes of our western farms! There are no mowing machines, nor iron rakes drawn by horses. There are no hay wagons such as we use. The men are cutting the grass with scythes, and the women are raking it together and carrying it to those racks of wood at the sides of the field. They tie it up in bundles and hang it out to dry in the sun just as we dry our washing. It is so rainy that the people dare not let the hay lie on the ground. After it is cured, it is hauled to the barns by ponies, in little wagons not much bigger than baby cribs, which move along on small wooden wheels. On some farms the hay is carried home by the women on their backs, and on others, where the fields are high up, it is tied into bundles and slid down on wire ropes. Sometimes buckets of milk are sent down from the hills in this way. The land is so rough that the people could not possibly use tractors or other heavy machinery.

We stop at a farm house for lunch, and are told we can



Interior of log cabin — type of hut in old Norway

have bread and milk, fresh eggs, and salmon. The farmer's daughter first brings in the bread. It is of the kind known as "flat-brod," which is used all over Norway. It is made of rye meal and water in thin cakes twice as big around as a dinner plate. It is so hard and crisp that we break it like crackers. Fish and eggs follow; they are well cooked and delicious. We have excellent butter and cheese, and as we go on with our journey we find that the Norwegians live well. They have but little meat, but we can get eggs and fish everywhere, and in the north we have venison and reindeer steaks and roasts, with reindeer hash next day.

The country people live plainly in all parts of Scandinavia. Their houses are small, seldom containing more than two or three rooms, although one farmer may sometimes have several houses for himself and servants. Every one works. We see women knitting in the hay fields while resting, and in the evening, find them spinning inside the houses. The women make all the clothes of the family. They weave the cloth, and cut out the garments and sew them. In some parts of Scandinavia they make beautiful lace. The people of one town often follow only one pattern, using the same design over and over again from one generation to another. The men manufacture most of their farming tools, and not a few make the harness for their ponies. The people are well educated. Children are compelled to attend school and nearly every one can read and write.

Our train is now coming into Oslo, which we have known as Christiania. Originally the capital of Norway was called Oslo, and this name has been resumed. Oslo is now the second largest city in the Scandinavian Peninsula. We take a motor car at the station and go to our hotel, where we leave our baggage and then take a drive through the city. Oslo is about as large as Denver, Colorado, and is quite as

beautiful. Its wide streets are well paved, and lined with large buildings of stone. It has many fine residences and public squares and parks. The people must be fond of flowers, for nearly every window has a row of plants in it.

The city is situated on a wide, deep fiord, and large ocean steamers can sail into the business section. We visit the wharves and find there a steamer starting out for Göteborg (yû-te-bör'y'), and as we wish to cross Sweden by the celebrated Gotha (gō'tä) Canal which connects that town with the Baltic, we take passage.

The ride is a short one, and we are soon upon land again. Göteborg is the chief city on the west coast of Sweden. It was once famous as a fishing place, and is now important as the western terminus of the Gotha Canal. We walk through its long, wide streets, bordered by canals walled with stones and crossed with bridges of iron. The place reminds us of the cities of Holland, and we enjoy its canals filled with shipping, its quaint old houses of brick, and its beautiful parks. We go out to the shipbuilding yards, and then visit the factories where they are weaving linen and cotton cloth, and making all kinds of machinery and paper, matches, tobacco, and sugar.

It is early morning when we start on our journey up the Gotha River and into the canal. We steam around the high falls of Trollhatten into Lake Venner. The Gotha Canal is about three hundred miles long, but is so largely made up of lakes and rivers that it has only fifty miles of excavated waterway. Our boat is carried up past the falls by means of eleven locks, and, after crossing the lake, we again rise by other locks until we are three hundred feet above sea level, on the highest point between Lake Venner and Lake Vetter. From this point we begin to descend; we fall from one level to another by means of locks, till

at last we sail out into the Baltic Sea, and a few hours later are steaming into the capital of Sweden.

Stockholm lies on both sides of a channel which connects the Baltic Sea with Lake Mälär (mâlâr). We coast in and out among islands as we come in, and if we went through into the lake beyond, we should find other islands, almost as many as the Thousand Islands in the St. Lawrence above Montreal.

Stockholm is cut up by canals. It has bridges connecting its islands, and its waterways are so beautiful that it has been called the Venice of the North. Everywhere we see boats moving about. There are many ships at the quays; the vast buildings rise right up from the sea, so that the city looks as though it were built on the waves.

We leave the ship and walk through the streets. We cross two or more bridges every half mile. The buildings are large and some have dormer windows stretching their heads out of the steep slanting roofs as though asking what the weather might be. There are many statues; these people are noted as sculptors, and are fond of the fine arts.

We see children everywhere going to school. The Swedes are as well educated as any people of Europe, and there are very few of them who cannot read and write. They vie with the Norwegians in their thrift and intelligence. Centuries ago the Scandinavians were known as the Norsemen. They were noted for their bravery on sea and land; their war vessels sailed many seas, and they made themselves feared in their wars with the other peoples of northern Europe. Now they are proving themselves equally great in the arts of peace.

Continuing our walk through Stockholm, we pass parks and public gardens. There are cafés in the gardens, and the family parties sitting about the tables under the



The great buildings of Stockholm may be seen near the waterfront. The city has so many canals that it has been called the Venice of the North

trees in front of them remind us strongly of the boulevards of Paris.

Notice the people we pass on the streets. What fair faces they have, and what very blue eyes! Scandinavia is the land of the blue eye and the towhead. There is a girl from the country. We have seen some dressed much like her in Norway. She wears a cap that comes down over her ears, rising in a peak at the front. Her short black skirt is of homespun, and her white waist has very full sleeves. She has on a long apron of red and blue stripes, and about her neck is a bright-colored handkerchief. There is a little girl clad the same way. We shall see many dresses like those out in the country, although most of the city people dress as we do.

But what is that huge building over there on the edge of the harbor? I mean the one with the wide terrace looking out on the water. That is the palace of the king of Sweden. It contains eight hundred rooms and is one of the fine buildings of Europe.

For many years, the two countries of the Scandinavian Peninsula were ruled by one king, although each selected its own parliament, which made all the laws for the people. In 1905, Norway separated from Sweden and established an entirely independent kingdom. Each country is now a constitutional monarchy, having its own king and parliament. The parliament of Norway is known as the Storting; that of Sweden is called the Diet. It is provided by law that the king of each country must be a Lutheran, for this is the established church of both Norway and Sweden.

Soon we leave Stockholm for a trip into the country. Both Sweden and Norway are well supplied with railways, although Sweden has by far the most railway track. We

visit some of the great factories for which Sweden is noted. We go by rail to the far north to see the iron mines. Swedish iron is about the best in the world, and is of great value in the making of fine steel. We saw them using it in Sheffield in the manufacture of knives. The largest of the mines lie about 100 miles north of the Arctic Circle.

Returning southward, we travel through many farming districts not unlike those of Norway. The best farms of Scandinavia are in the south, for most of the level land is there. The country is well cultivated, but it cannot produce wheat and rye enough for its people, and large quantities of breadstuffs are brought in from other countries even from the United States. Nearly half of all the grain raised is oats; but flax, tobacco, and hops also are grown. The country has many sheep, cattle, and hogs.

The farms of Sweden are small. Some are not much bigger than a village lot and many are so long and so narrow that you could hardly turn a wagon about in them. According to law, when a man dies, his land must be divided equally among his children. Therefore, his farm is cut up into strips and one strip is given to each child. Many of the strips are so small that there are no houses upon them. One man often owns a score of these little farms.

One might think that people could not make much out of land so divided, but the Swedes do very well. Their climate is so damp that grass grows luxuriantly, and they are such good dairymen that their butter and cheese are in great demand in all northern Europe.

We see quite as many women and children at work in the fields as in Norway. There comes a woman with a baby slung to her back. The little one is wrapped up in a cloth, the ends of which are tied over the mother's breast. How can the woman possibly work with such a big load on her

back? Her baby will surely fall off if she stoops down and tries to tie the grass into sheaves as the other women are doing. Yes, that is so, and she knows it; for, as you see, she has unslung the baby, and tied the two ends of the cloth in which it is wrapped to the branch of that tree so that the little one swings to and fro in the breeze while she works. The usual cradle is a box with cords tied to its corners and brought together above the center so that it can be hung to a hook from one of the rafters. A slight push sets the box swinging, and with the motion the little one drops off to sleep.

During our travels in Norway and Sweden we meet many people who ask about their relatives in America. Millions of our best immigrants have come from Scandinavia. They have taken up farms in the region about Lake Superior and Lake Michigan and engaged in lumbering and other businesses of many kinds. They make excellent citizens and patriotic Americans.

Indeed, some of the people tell us they think the North American continent should belong to Scandinavia by right of discovery. They say that a Norwegian vessel under Leif, the son of Eric, sailed westward to Greenland, almost five hundred years before Columbus crossed the Atlantic and went from there southward along the coast of New England. They have a tradition that they established a settlement, called Vinland, and that white children were born there. This may have been so, but the colony had disappeared and been forgotten before John and Sebastian Cabot discovered part of North America.

Make a sketch map of Scandinavia, showing Norway and Sweden. What waters almost surround the peninsula? Compare it in climate with Florida; with Alaska. Which of our states equal it in size? Which is larger, Norway or Sweden?

Why are the harbors of Norway open in winter and those of Sweden closed? How far is Stockholm from Berlin? from Copenhagen? from London?

Describe a trip up a fiord. What is the Gulf Stream? Trace its course over the ocean. What value has it for western Europe?

What races of people inhabit Scandinavia? Name some other peoples who belong to these races. From where did the Laplanders come?

Tell all you can about reindeer. In what part of the United States are they used? (See Carpenter's "North America.")

Describe your trip to the North Cape. Show the difference between midnight there and at your own home; in midsummer; in midwinter. Why is there such a difference?

Where is the great forest zone of Europe? of Scandinavia? For what are the woods of Scandinavia used? Of what material is this book made? Mention some other uses of wood. Where are the great forest regions of the United States? (See Carpenter's "North America.")

How do they make hay in Scandinavia? In the United States? Why the difference? What are the chief crops of Sweden?

Has Scandinavia much coal? What power takes the place of coal? Why? Where are the chief iron mines? Where in this journey have we seen Scandinavian iron used?

Why are the Scandinavians great sailors and fishermen? In which country is the fishing industry more important, Norway or Sweden? Compare the voyage of Leif Ericson across the Atlantic with that of Columbus. In what year did each make his discovery?

What are the two principal cities of Scandinavia? Describe them. Compare the Swedish capital with a famous city of Italy. How are Norway and Sweden governed?



XXVII. THE LAND OF A THOUSAND LAKES

GET out your rubbers and keep them handy. We are in Finland, and you will need them if you tramp around the country. "Finland" means "fen land," and much of it is made up of swamps and marshes. It is sometimes

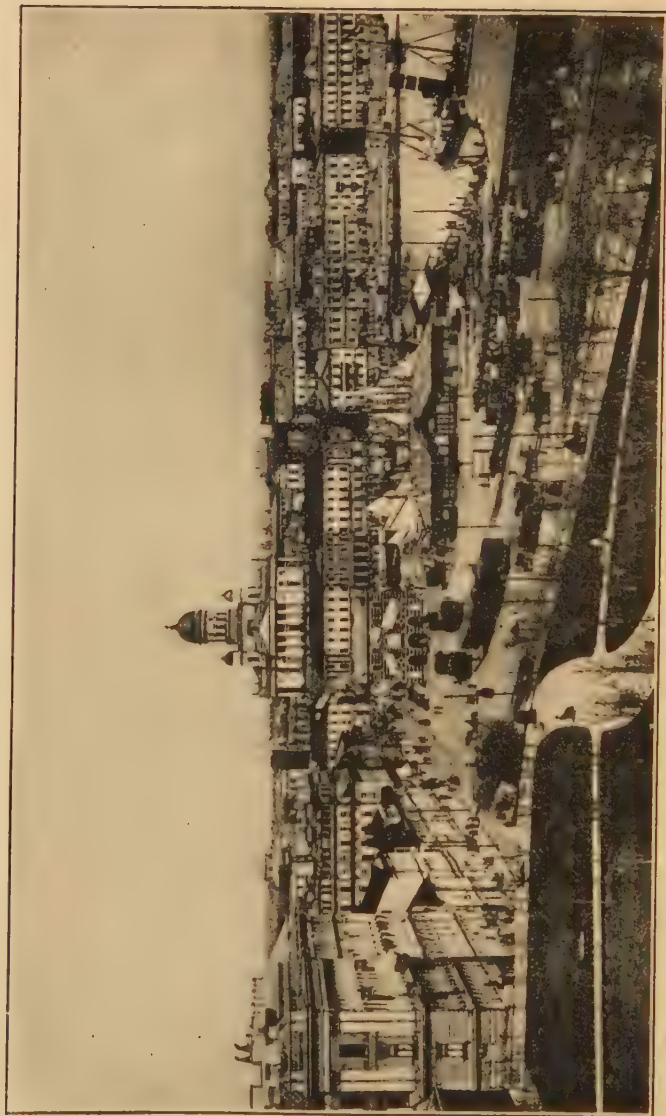
called "The Land of a Thousand Lakes." More than one tenth of its surface is water, and the lakes are so joined by canals that we can go almost everywhere in motor-boats and canoes. There are streams everywhere, and over two hundred rivers pour out into the Gulf of Bothnia.

We came to Finland from Stockholm, across the Gulf of Bothnia. We called at Åbo (ô'boö) and Hango, two southwestern ports, and have now landed at Helsingfors, on the Gulf of Finland. Finland lies between Sweden and Russia. It is a wide strip of rolling land about one thousand miles long. Its coast line runs in and out, with hundreds of fiords and thousands of islands, some

rocky and bare, others covered with pine trees. It reminds us of the western part of Norway, which we saw on our way to the North Cape, though it is lower than the Norwegian coast. The climate is tempered by the winds from the sea, and the winters are warmer than those of Alaska in the same latitude.



Our route through Finland



A view of Helsingfors, which runs around a beautiful bay shaped like a half moon

Both Alaska and Finland are lands of long days and long nights. In winter it is dark almost all day, and in midsummer it is light almost all night. It is midsummer now. We can read our guide books at midnight without candle or lamp, and can take photographs at two or three o'clock in the morning. The weather is warm, and quite hot at noon if there are no clouds in the sky. The long hours of sunlight make the plants grow twice as fast as at home. The whole country is green, and the land is covered with wild berries and flowers and will stay so until September. Then Jack Frost will sneak in and coat the lakes and canals with a thin film of ice. A month or so later the ice will be thick enough to support men and horses, and in midwinter it may extend across the gulfs of Finland and Bothnia, so that sledges can be driven over to Sweden or Russia on ice. For the five months or more of winter the land is covered with snow, and the chief sports are skating, snowshoeing, skiing, and riding about in sledges and sleighs.

But let us leave the hotel where we are stopping and stroll about Helsingfors, the largest city of Finland. It is the capital of the country, and the chief commercial and industrial center. Situated on the Gulf of Finland, the town runs about a beautiful bay shaped like a half moon. We could see the huge granite buildings and churches long before we came to anchor at the wharves, and the white roof and gold domes of the Russian church were visible far out at sea. This was true also of the Lutheran cathedral in the center of the crescent formed by the city. There are many Protestant churches in Finland, and nearly all the people are Lutherans.

Here we are at the market square near the wharves. Those steamers at anchor have brought in grain, sugar, coffee, and tobacco, as well as leather and hides, and

will carry away large quantities of lumber, paper and wood pulp, butter, ironware, tar, and fish. That vessel unloading bales of cotton came from New Orleans.

The market is crowded with buyers and sellers. There are men and women peddling vegetables, berries, and flowers, and some with butter and eggs, fowls, meat, and fish. The crowd is well dressed, and the girls from the country wear the gayest of colors. Some of the men and boys have vests of bright red, and not a few carry *puukkos*, or knives which hang from their belts. Most of them wear white coats. They have caps on their heads. The city people dress much as we do.

How well the market is kept. It closes at noon. At that time great flocks of pigeons fly down to pick up the stray crumbs or bits of food. The streets are then swept and washed until they are so clean we could eat our dinner from the stones. No refuse of any kind is allowed to remain on the streets, and even the parks have wire baskets for orange skins and scraps of waste paper.

During our stay we visit the public buildings and are received by the president. Before the World War Finland was a dependency of Russia, and it was badly governed. It is now a republic and elects its own rulers. Every man and woman over twenty-four years of age has the right to vote, and the Parliament is composed of both women and men who work together in making the laws.

The Finns number several millions. Altogether, they are many more than the people of Chicago. We have some in America, and especially in Michigan, Minnesota, and North and South Dakota. Many of them are farmers, although we also have Finns in the cities. They make excellent citizens.

Some claim that the Finns belong to the Mongolian race. But they have lived long in Europe, and their appearance, manners, and customs are those of the white race. They are well educated. Helsingfors has a great university and there are public schools and schools of agriculture and trade all over Finland. In all of these schools, gymnastics are taught, and every public school has a garden outside its playground for teachers and pupils.

Most of the schoolhouses have double windows on account of the cold winters, and many have shower baths which are used in summer. Every child has a hook for his overcoat, and a pigeonhole for his rubbers. Every pupil has his own desk with a lid that lifts up on hinges. The girls' desks have pincushions underneath, tacked to the lids. The school hours are from eight to ten and from one to three.

The vacations in Finland are much like ours. There are long holidays in summer and at Christmas. There are also six days at Easter, and one extra holiday every month. There is a picnic on the last Tuesday in February, which the boys and girls celebrate on their skates and skis. At this time they have hot milk and rolls upon which almond paste has been spread.



XXVIII. BY MOTOR BOAT ACROSS FINLAND

LET us now take a motor launch and leave Helsingfors for a trip through the country. We might go on the cars, for Finland has several thousand miles of good railways, but the boat trips are more fun. The country is

low but hilly, and the great ice sheet which once covered it in the same way that the ice sheet covered the northern part of America, gouged hollows in the granite rock everywhere underlying the soil. These hollows have been filled by the water, forming more than one thousand lakes. There are many lakes in Canada which were formed in the same way. The Finnish lakes have been joined by canals, and we shall sail in our boat through the farms and the forests. Most of the towns and the villages are on the lakes, and if we wish we can ride through canals clear out to the sea.

Some of the lakes are dark and discolored by the swamps they drain; others are of a velvety blue, and some are clear and sparkling. The largest is Lake Saima, which is longer than the distance from New York to Boston. It is sometimes called the "Lake of a Thousand Islands." It is connected with the Gulf of Finland by the Saima Canal. This canal is cut through solid granite; it cost five million dollars and took eleven years to build. It is about forty miles long.

On our way through the lakes we pass through canals in which we are lifted by locks from one level to another, and now and then see rivers which have rapids and waterfalls. Some of the falls are used to generate electricity, and in time such electric power will run all the factories. It will take the place of the coal which is now imported from other countries. One of the most beautiful falls is Imatra, which the Finns say compares with Niagara in beauty. Here the waters of numerous lakes drop through the River Vuoksen into Lake Ladoga (lá'dō-gá). In this course they are crowded through a narrow gorge about a half mile in length. The drop is only sixty feet, but electricity equal to eighty thousand horse power could be devel-

oped. Finland has so many other falls and rapids that the total water power available is said to equal three million horse power. This is so much that twenty or thirty million tons of coal a year could not more than supply it.

As we go on with our voyage we see other waterfalls and are asked to take a ride down the rapids of one of the swift-flowing rivers in the tar-boats. These boats are about fifty feet long and only three feet in width. They are made of thin planks bound with fibers of wood and pitched with tar. Each boat carries twelve persons, and in our rides we divide our party into dozens. Each craft has a man at the prow to keep the boat steady and one at the stern to steer it out and in through the rocks. We start where the water is smooth and are soon in the midst of a foaming current, flying in and out among huge blocks of granite. We have to sit straight and not stir as we shoot down through rapid after rapid, going faster and faster. Our hearts jump to our mouths, and stay there until we come out into the smooth river below. We look at our watches and find that it is only twenty minutes since we climbed in on the smooth water above. Our thrills have been so many that it seems several hours.

Returning to our motor boat, we chug onward through one beautiful lake after another. Now we stop at a village where the children come to the shore with baskets of birch bark full of strawberries. There are so many of these berries that the Finns call their country "Strawberry Land." The berries grow wild in the forests. They are so cheap that one can buy all he can eat for five cents of our money. Finland is noted also for its raspberries, and for the cranberries which thrive in the swamps.

The village has houses of wood painted bright red, with window sashes of white. The double windows keep out

the cold of winter. We land from our boat and enter a house. At the front door is a mat of fir branches on which we rub the dirt off our shoes. In the corner of the living room is a huge brick stove reaching from the floor to the ceiling. The furniture consists of some chairs and a table, and at one side of the room is a sofa. We are asked to sit there. The sofa is considered the seat of honor, and the children of the family are not allowed to use it when visitors come.

Later we go to the kitchen, and then take a look at the bath house, which is used every day in the summer and about once a week in the winter. It is a little log house with shelves or platforms around the walls. In the center is a stove covered with stones. Buckets of water are poured on these hot stones until the steam fills the room. The bathers lie on the shelves in the steam, and now and then get down and whip their naked bodies with softened birch twigs to make the sweat come. After the bath one may take a plunge in the lake, or in winter he may roll about in the snow. The steam has made him so warm he does not take cold.

We are interested in watching the women bake bread. They use rye flour, which they make into round flat loaves, each of which has a hole in the center by which it can be hung up or strung on a pole. The bread is baked so hard that it will keep for months, and some families have only two bakings a year.

We see many farms as we coast the shores of the lakes. Southern Finland is a land of small farms and pastures. The country has thousands of cattle, and exports the finest butter and cheese. Hango, the chief butter port, sends shiploads of butter to England and elsewhere.

As we move on we pass many fields of rye, oats, and

barley. They are inclosed in fences of split saplings or logs. Hay, oats, and barley are grown almost as far north as the Arctic Circle. The chief trouble is to cure any fodder in the damp air. For this reason, much of the hay and grain is dried on poles or ricks set up in the fields, or in log barns in which wood fires are built. In most places sleds take the place of farm wagons.

Farther north we enter the wide belt of pine, fir, and birch which crosses Finland from one side to the other. We are now in the great forest zone of northern Europe, which is one of the richest timber lands of the earth. The forests of Finland supply almost three fourths of the exports. They are four times as large as the exports from the farms and pastures. The government has gone through the woods and counted the trees, and the officials can tell us just how much pulp wood and how many logs they have to sell. The most valuable trees are the spruces and pines used to make lumber and pulp wood for paper. Finland supplies a large part of the pulp on which books and newspapers of Europe are printed.

Other kinds of trees furnish wood for tool handles, wagons, and sledges, and many are burned for the potash in the ashes. From the pines come turpentine and resin. The birch tree gives the chief fuel for the homes and the railroads. Twine is made of its roots, and rough brooms and bath whips from the twigs. In some parts of the country the birch leaves are used for sheep feed.

Locate Finland. By what two names is it often known?

To what state of the United States is it nearest in size? What part has much the same climate?

Describe the twenty-second of December in Finland; the twenty-second of June.

Take a walk through Helsingfors and tell what you see.

What is the government of Finland? Could you vote there at the age of twenty-one years?

To what race do the Finns belong? In what continent does most of that race live? In what country?

Write a story of your trip through the lakes. What are the chief crops?

Describe the forests. What are the principal trees? What part of North America has these trees? How is wood pulp made? Paper? (See Carpenter's "North America.")

What can you tell about the great ice sheets of long ago? Why did this make Finland a land of lakes?

Finland has little or no coal; how can it become a manufacturing country?

To what empire did Finland belong before the World War?



XXIX. GERMANY — GENERAL VIEW

WE have left Finland and steamed southward over the Baltic Sea to Copenhagen and thence on to Kiel (kēl) in northern Germany. We have now arrived at the eastern end of the Kiel Canal, which the Germans have cut through from the mouth of the river Elbe (ēl'bē) across the lowland to the Baltic Sea. It was built chiefly as a means of defense and that German shipping might not have to take the long trip around Denmark on its way to and from the ocean. After the World War it was made free to all nations, and is now a common trade route for all the countries which border on the Baltic Sea. The canal is ten miles longer than the Panama Canal and wide enough and deep enough for the largest ocean steamers to pass easily. It is a sea level canal with locks at each end to control the tides. It cost only about one fourth as much as our canal at Panama.

We steam into the wide harbor of Kiel, passing many ships moving on their way to and from the Baltic. We pass shipbuilding yards, fixed and floating docks, and many foundries and other works engaged in ship construction, and are almost deafened by the din when we leave our steamer and walk through these establishments.

Next day we enter the Kiel Canal on a ship bound for Hamburg. Our vessel is raised by means of a huge lock from the harbor to the canal level. The gates are then opened by machinery and we move slowly on toward the southwest. The ride takes a whole day. The distance is not great, but there are many ships going both ways and none may steam faster than five miles an hour.

How interesting it is! The scenery is like that of Holland or Denmark. The land is low and flat, and we can see far away on either side. Now we ride through meadows in which fat black and white cattle are grazing and now past a marsh where long-legged storks are wading about, poking their long bills into the mud, searching for food. There are storks' nests on some of the farmhouses, and great windmills like those of the Netherlands. We pass a steamer coming in from the Atlantic, and we cheer as we see the American flag at its stern. It has come from the United States with merchandise for some place on the Baltic. We wave our handkerchiefs to the people on board as we go by. At last we reach the lock at the western end of the canal and are lowered to the Elbe near where it flows into the North Sea. Here our ship turns to the left, and we steam rapidly through the wide estuary of the Elbe, and within a few hours are at anchor in Hamburg, the chief sea gateway to one of the most important countries of Europe.

Before we begin our travels in Germany let us take a

view of the land and its people. The German nation is larger than any other in Europe excepting the Russian. It has more than half as many people as the United States, and they are among the most intelligent and industrious of the world. They belong to the Teutonic family and are always ready to fight and work for a great share of all that the world has to offer. We shall always find them among our chief competitors in manufacture and trade. Therefore, we must learn all about them and the land in which they live.

Germany is not a small country. It has nearly one twentieth of the land of all Europe, and is larger than Ohio, Indiana, Illinois, and Kentucky combined. Germany begins at the foothills of the Alps and slopes toward the Baltic and North seas. It includes some of the most thickly peopled parts of the great low plain of northern Europe. The best soil is in the rolling lands at the south and in the valley of the Rhine, but even the poor sandy plain at the north is well tilled, and as a whole the land is well farmed.

The country is rich in minerals. It has beds of coal and iron that lie near together, and is one of our chief competitors in the production of iron and steel. It has also silver, copper, lead, and zinc, and its potash mines are the largest of the world. Its abundant supply of cheap potash enables the people to make fertile the great sandy plain.

If you look at Germany as it lies on the map, you will see how well fitted it is for trading with other nations. It is in the heart of Europe, surrounded on all sides by some of the most energetic and thrifty peoples of the world. On the west are the French, Belgians, and Dutch, all great manufacturers and anxious to buy and sell. On the east

are the Poles and Russians, and on the south are the Czechoslovaks, Austrians, Swiss, and Italians, for the Italians are accessible by tunnels through the Alps. At the north the country faces the Baltic, giving an easy water route to Russia, Norway, and Sweden, and it has also an outlet to the ocean through the ports of Bremen (brēm'en) and Hamburg. This makes it the next-door neighbor of England, and accessible by sea to all other parts of the world.

Moreover, the Oder, the Elbe, the Rhine, and the Weser (vā'zēr) rivers connect Germany with the North and the Baltic seas, and it has other rivers and canals that give it an almost perfect system of commercial transportation. It has so many interior waterways that if they were joined end to end they would make a navigable highway nine thousand miles long, or more than twice the length of the Mississippi-Missouri. The land is covered with good roads and has a greater length of railways than any other country in Europe, and more track to the square mile than any excepting Great Britain.

But we shall see all these things with our own eyes as we go on with our travels, and a good place to start will be right here at Hamburg.



XXX. THE SEAPORTS OF GERMANY

HAMBURG is an old city. The Emperor Charlemagne built a castle here about 808 A.D., and in the Middle Ages there was a town here which had some foreign trade. Hamburg is now bigger than any other city in the United States except New York, Chicago, Philadelphia, Detroit, and Los Angeles. It is the chief outlet by sea for Germany in its commerce with the rest of the world.

But why has Hamburg become so important to this part of Europe? We can easily see when we think of the vast industrial region behind it and how the port is connected with the interior by water and rail. It lies on the wide and deep Elbe River, farther inland than Philadelphia, at a place where the highways of commerce of a great part of northern Europe and the rest of the world meet. By the Elbe itself goods can be carried clear across Germany into Czechoslovakia, and by the Havel (hä'fel) and Spree (shprä) rivers to Berlin, and thence by river and canal to other waterways farther east.

Moreover, Hamburg is a free port. This means that no duty is charged on goods brought here for transshipment, and therefore its harbor is filled not only with German ships but ships from all over the world.

We are surprised at the number of vessels from the United States. See that great steamer unloading cotton; the bales are lifted by derricks from the ship right into the warehouse. A little farther on is one taking off meat, while others are discharging cargoes of wheat and corn or taking on potash and manufactured goods for shipment abroad.

See that huge tanker that has just arrived from Port Arthur, Texas, with a load of petroleum. Its cargo came from the oil wells of Oklahoma, and was carried in pipes to the refineries on the Gulf of Mexico, whence it started across the ocean for Hamburg. The Germans consume much of our oil as well as our copper, pig iron, and steel, most of these goods being landed at Hamburg, or at the port of Bremen, situated at the mouth of the Weser River, not far away. We furnish Germany three fourths of its cotton, nine tenths of its copper, and much meat, especially lard. Before the World War we bought more of Germany than of any other country except Great Britain.



Hamburg is cut up by canals. The boat at the left is unloading American coal oil

As we walk along wharf after wharf, we pass miles of ships from all parts of the world. There are steamers from Australia unloading wool, from Africa discharging palm oil, rubber, and ivory, and from Italy unloading oranges and wines. There are vessels from Norway and Sweden loaded with lumber, from Argentina bringing mutton and beef in cold storage, and from Brazil with cargoes of coffee and rubber.

The wharves are so arranged that the ships come right to the warehouses and lie in inclosed docks such as we saw in London and Liverpool. The city is cut up by canals, and some goods are unloaded into flatboats and barges and towed through the streets. The landing arrangements are excellent, and everything is done to cheapen the ways of transport and trade.

It is only a short ride by rail from Hamburg to Bremen, the other chief port by which Germany has direct access to the ocean. The town is situated about forty miles from the sea and has good water connections with interior Europe. We visit the factories, including those for making cigars, snuff, and smoking tobacco, and then take a train for a rapid look at the German ports on the Baltic.

Lübeck belonged to the Hanseatic League, a great trading association formed during the Middle Ages by the most important cities of Germany and other parts of Europe. This league was to protect its members against the pirates of the sea, and the robber barons who lived upon the rivers and exacted tolls of all the boats that passed by. Lübeck was the capital of the league, and for a long time was one of the chief commercial centers of Europe. We are interested in the old houses, some of which were built centuries ago. We are told that the city is much smaller than it

was in the past. In some ways it is still important, but Hamburg, only thirty-nine miles away, has absorbed most of its trade.

We steam along the Baltic past the island of Rügen, and then go down the River Oder to Stettin, an important port not far from the sea. It has a fine harbor and is connected by river and canal with all parts of northern Germany. It is only eighty-four miles from Berlin (bur-lín'), and much of the freight for that city is landed here and taken inland by railroad or by the river and the canals.

We visit the shipbuilding yards where the largest of the German vessels are being constructed, and then take a train for Berlin, the capital of Germany.



XXXI. BERLIN — THE CAPITAL OF GERMANY

WE start out from our hotel in Berlin this morning. The sun is shining and the city looks beautiful under its rays. The blocks of light yellow houses, four, five, and six stories high, seem to have received a fresh coat of paint. The gilding and carving on the palaces and great public buildings stand boldly out, and the statues of marble and bronze in the squares, on the bridges, and in the gardens and parks seem almost alive. The policemen strut about as spick and span as so many dandies, well-dressed people throng the sidewalks, and the whole city looks new.

We motor through one long street after another, our automobiles moving along noiselessly over the asphalt. The roads are wide and as clean as the pavements of Holland. There is not a scrap of paper to be seen, although



Schoolboys in Berlin. All children from six to fourteen years old are required to go to school

some of the streets are still in the hands of the cleaners. See those boys in caps and uniforms clean up the streets. They are pushing the dirty water toward the sewers. They

are scrubbing the highway with rubber mops, which leave it as clean as a floor. A large part of the work is done by such boys, who receive a very small sum per day.

How well kept everything is! The whole country moves like a machine, and there are so many policemen to enforce order that we are seldom out of their sight. We are warned that if we break a bottle or jug on the street, the police will make us pick up the pieces and carry them off, and that no paper or trash must be thrown down on the sidewalks. When the ice freezes in winter the police put up green flags to let the children know they may skate, and they mark out with red flags the places they are permitted to use. If the ice is thin or soft no skating is done. Companies of children are not allowed to go about alone after dark, and if a child makes a great noise on the street his parents may be punished.

In Berlin the police watch even the dogs. They warn you that your dog must not bark on the streets later than ten o'clock in the evening. There are also fire police who aid in putting out fires, and building police who see that the mortar and rubbish of new buildings are kept inside the walls, and that no one puts up a building or even a business sign until his plans have been approved by the officials. The people are proud of Berlin, and will not allow anything to be erected that will injure its beauty.

We conclude our general idea of Berlin by riding around it on the Ringbahn, a belt line that surrounds the city. Berlin covers more than twenty-five square miles, lying in and beyond the Spree valley, which is here three miles in width. The country about is so sandy that the city has been called "The Sand Box of Europe."

The oldest part of Berlin is on an island in the Spree River, where there was a town several hundred years

before America was discovered. The Spree gave the people access by the Havel to the Elbe, and later canals were made by which they could get to the Oder. The town owes its growth to its central position, where the trade routes to all northern Europe cross, with railroads and waterways to all parts of Germany. It has access to both Hamburg and Stettin by water, and can get the raw materials for manufacturing at a low cost. Next to London and Paris Berlin is the largest city in Europe.

We cross many railroads on our ride on the Ringbahn. There are twelve trunk lines that come into the city. There are hundreds of smokestacks on the outskirts, pouring their black columns into the sky. Berlin is one of the chief manufacturing towns of continental Europe. It has silk, woolen, and cotton mills; it has vast engine works; and makes beautiful gold and silver ware, fine jewelry, and all sorts of fancy goods and notions, as we shall see in the stores when we shop. There are many little factories, and many small industries are carried on by the people in their homes.

Leaving the cars, we take a drive through the Thiergarten, the great park of Berlin. It contains six hundred acres and looks like a cultivated forest with lakes, little canals, and beautiful walks and drives.

We visit the zoölogical garden, where we see the largest collection of monkeys in Europe. We watch the keepers feed the wild beasts and throw peanuts at the feet of the elephants. They pick them up with their trunks and put them into their mouths.

Passing out of the Thiergarten through the Brandenburg gate, we come into Unter den Linden, a street as wide as Pennsylvania Avenue in Washington. It is about a mile long and has seven different roadways and paths, some

for heavy vehicles, others for carriages, some for people on horseback, and others for bicycles and pedestrians.

We ride along Unter den Linden, past the large public buildings, the statue of Frederick the Great and the royal palaces, and then turning to the right and the left make our way through miles of other streets walled with fine buildings.

We ride through Friedrich Street and Leipsiger Street, one of the chief shopping centers, and go on and on, seeing big buildings everywhere. There are no little houses in Berlin or cottages with gardens in front of them, so we wonder where the poor people live. We soon discover as we stroll about through the city. Their homes are everywhere, often in the basements and attics of the very large buildings. Very few families own a home of their own. Nearly all hire flats or apartments, so that we often find the rich, the well-to-do, and the poor in the same house. Each family has its own apartment, according to what it can pay. Many of the homes have less than six rooms, and many others only two or three rooms. Thousands of people live in cellars under the ground.

Such buildings in our cities would have hot-air furnaces or steam or hot water to heat them. Here each home is heated by stoves of porcelain, one to each room. The stove is usually in one corner and it is so tall that it reaches from the floor almost to the ceiling. Near the bottom is a brass door a foot square and inside it an iron door opening into a little fuel chamber. A small amount of coal with some kindling is put in; this will heat the bricks and porcelain, and, once hot, the stove gives forth heat the whole day.

How many restaurants, hotels, beer halls, and cafés there are everywhere! Beer is the favorite drink of the Germans. They take it with their meals and also in the

beer gardens, where they sit about at tables under the trees and drink while they listen to the playing of the bands.

Early one morning we visit the central market, an enormous building roofed with glass covering six acres of ground. It has hundreds of wholesale dealers and many retailers. Most of the small dealers are women who stand behind marble counters loaded with vegetables, dressed fowls, and meats of all kinds. How many geese there are! The Germans are so fond of geese that Berlin alone consumes two millions of them every year.

We walk through the fish market and watch the fish swimming about in the water. They are sold alive and we are told we may choose any we wish and the fishwife will dip it out with her net. Berlin eats more than one million pounds of fish every day.

We have no difficulty in finding the cheese market; we have only to follow our noses. Most German cheese has a strong odor and some kinds, such as Limburger, scent the whole building. The Germans eat more cheese than we do; the poorer classes eat it as a food rather than as a relish or for dessert. Much of the butter is sold wrapped in cabbage leaves, the golden balls surrounded by green.



XXXII. BERLIN — THE GOVERNMENT

DURING our stay in Berlin we visit the royal library, which had one of the largest book collections of the world, including the first Bible printed with movable type. It was made by Gutenberg forty-two years before Columbus discovered America, and it may be called the father of the millions of Bibles now printed each year.

We visit the museums, for which Berlin is famous, and spend some time in the great university, which has thousands of students. The Germans believe in education. They have day schools and night schools and even Sunday schools where one may go to learn a trade of one kind or another. There are weaving and designing schools at the silk, wool, and cotton weaving centers, and also electrical schools and schools for teaching the making of chemicals and dye-stuffs and machinery of various kinds. There are public schools everywhere, and all children between the ages of six and fourteen are compelled to go to them. The school hours are longer than those of the United States, and in winter, because Germany lies so far north, many of the schools have to use electric light during a great part of each day.

Before the World War Germany was an Empire, ruled by the Kaiser or Emperor. It had a parliament, but the Emperor had a great deal of power and it was to increase the size of the Empire, to control the greater part of Europe, and to get more trade advantages that the war was fought. The war was so extended that it soon included the greater powers of the world, and the United States went in to aid in the defeat of the Germans. The war was the most terrible in history. Billions of dollars were spent, millions of lives were lost, but Germany and her allies, Austria-Hungary, Bulgaria, and Turkey, were conquered. In the peace terms Germany lost Alsace-Lorraine and other territories, including some of her most valuable coal and iron mines, also all her foreign possessions.

Germany is now a republic, but the capital is still in Berlin, and the chief departments of the government are there. We visit the Reichstag building, not far from the Thiergarten, where the parliament or congress meets to make

the laws. The German congress consists of two houses, the Reichsrat, the members of which are appointed by the states, and the Reichstag, whose members are elected by the people. The Reichsrat is like our Senate, and the Reichstag corresponds to our House of Representatives. The scenes in both chambers resemble those of our Congress, and as we listen to the debates we see that the Germans have political parties much the same as we have.

Leaving the Reichstag building, we go to the palaces and other structures where the government departments have their offices, learning much about the country and people and how the government business is managed. We find every one busy and are told that the government is making every effort to increase the trade and develop the resources of Germany. It does all it can to help every industry, and is making a struggle to recover from the World War, by which it lost its foreign commerce, most of its shipping, and all its colonies in Africa and Asia, which were many times as large as Germany in Europe.

Germany still has large deposits of iron and coal, and the government sees that they are mined without waste. Most of the coal is not as good as ours, but it is made to furnish as much power as it can. The government encourages the making of nitrates from the air to be used as a fertilizer, and it regulates the sale of its potash so that plenty of that fertilizer is kept in Germany for the beet sugar and other industries. The potash mines are scattered here and there over the country, but the richest are in and about Stassfurt, a little town of Saxony not far from Leipsig. The potash is taken out by running shafts down into the beds, and digging tunnels from them out in every direction. The potash salt is blasted down by dynamite, carried on electric cars to the shafts, and thence raised to the surface. Many



German peasant women harvesting acres of sugar beets, great quantities of which are exported

thousands of men are employed in the mines, and the industry is one of the most important in Germany. There are great beds of potash in Alsace-Lorraine, which since the war have been mined by the French.



XXXIII. RURAL AND MANUFACTURING GERMANY

WE have left Berlin and are traveling leisurely by rail from place to place through the farming and manufacturing districts of Germany. How clean and orderly everything is! The railroad guards are in uniform, for the railroads belong to the government. They tell us where to go and just what we may and may not do. When we stop at a station the officials give us a metal ticket bearing a number showing what cab we may take. Every station has its first, second, and third class waiting rooms, and there are first, second, and sometimes third and fourth class cars. The fourth class are uncomfortable, for the seats are hard, wooden benches. We usually ride second class, as we wish to be with the people, and most of them are so economical that they seldom take any other class than the second or third.

Our first travels are west of the Oder in a part of the country most of which is devoted to farms. Largely owing to its cheap potash, Germany grows about one fourth of the rye and one seventh of the wheat of all Europe. It produces more potatoes than Ireland, and enough sugar beets to export vast quantities of sugar to other countries. Nevertheless it has so many people in its factories and foundries that it cannot raise enough food for them all, and has to import food stuffs from our country and elsewhere.

Most of the farms are small, but they are kept like so many gardens. There are no fences, and the many-colored crops look like a great patchwork quilt spread out before us. There are fat cattle in the barnyards. The cattle are usually kept up, the grass being cut and brought to them. We often see flocks of sheep and geese watched by women who knit as they keep them from straying.

Now we are passing over a smooth white road lined with trees, whose rows seem to meet in the distance as the road stretches on and on. At every crossing a woman with a flag guards the railway track while the train passes. Now we have stopped at a farm village close to the railway. The houses are low, of one or two stories of brick or stucco, with great rafters or beams set into the walls. The roofs are of red tile or gray thatch. The buildings are close to the street with gardens behind them. The people do not live on their farms, but in these little villages, from which they go out to their work.

See that field of sugar beets opposite the small station where we are stopping. There are women and girls on their knees pulling out weeds. When the beets are ripe they are cut up and boiled in steel vats to get out the sugar, which is shipped all over the world. Germany produces more beet sugar than any other country.

How many women there are at work in the fields! In some districts we see more women than men. They spade the ground and hoe the crops. They aid in the haying, tossing the grass up with pitchforks that it may dry more quickly. They even help load it on wagons. Women do much of the carting, and in some of the smaller cities we see one now and then driving a yoke of oxen. In Bavaria one may see women sawing wood on the streets or breaking stone on the roadways. Sometimes they act as peddlers,

driving about little carts loaded with milk or vegetables, and aiding the dogs, which are harnessed up with them.

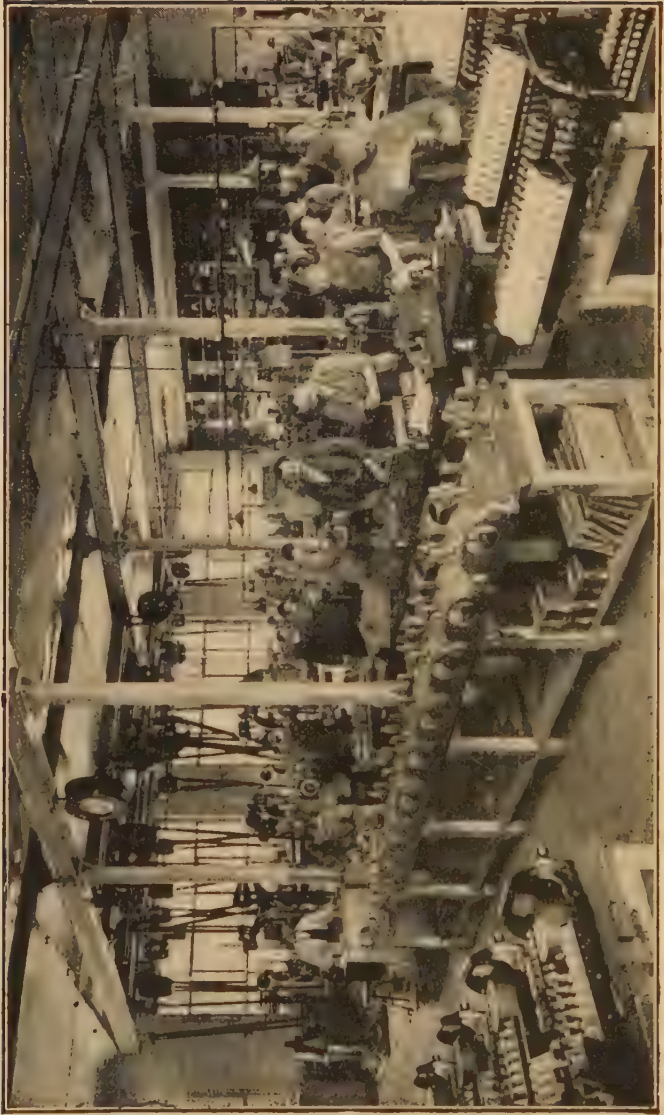
During our journeys we visit Breslau (brës'lou), the third city of Prussia. It is a great wool and grain market situated on the Oder River, which divides it into two parts.



Where we travel through Germany

It is not far from coal and iron mines and hence has become a great manufacturing center. It has a large trade with Poland and Russia.

We go from Breslau to Dresden, the capital of Saxony and one of the finest cities of Europe. The town, which is situated on the Elbe, about one hundred miles south of Berlin, is one of the most beautiful in Germany. The Elbe is crossed by five fine bridges inside the city, and there are so many statues, monuments, and collections of curiosities and art that we seem to be traveling through a mu-



In this Berlin factory they are making electrical machinery

seum. In the royal palace we visit the famous Green Vault to look at the wonderful carvings of gold, silver, and ivory, and the jewels and other precious curios gathered from all over the world. Here there are golden dishes, cups, and vases. There are queer little figures of men and animals made of misshapen pearls, and also the Green Diamond, which weighs five and one half ounces and is one of the most beautiful diamonds ever found. The Dresden gallery has paintings from the most famous artists of Europe, including the Sistine Madonna of Raphael, one of the most beautiful pictures ever put upon canvas.

A motor-car ride of two hours over an excellent road takes us from Dresden to Leipzig, the chief commercial city of Saxony, and the fifth largest city of Germany. It is situated on a rich plain at the junction of several rivers, so that it forms one of the best supply and shipping points for the manufacturing districts of Saxony.

Leipzig is the chief book publishing town of the world. It has one thousand bookselling and printing establishments, and publishes more than sixty million books every year. It holds book fairs which are attended by booksellers from all over Germany. It is a great educational center, with a university attended by more than four thousand students. It has fairs at Michaelmas, New Year's, and Easter, at which furs, leather, cloth, glass, and other things are sold, and to which many of our merchants go to buy goods. Its commercial importance is due to its situation between the valleys of the Rhine and the Elbe.

We have seen many factories and foundries during our travels. Every district has its manufacturing towns, and the country fairly hums with moving machinery. The beds of coal and iron which lie near together, and the copper, zinc, lead, and other metals found in the country, have

enabled the Germans to become a great industrial nation. They have more than seven hundred factories that make machinery alone. There is one steel works in the Rhine valley that covers over a thousand acres. The people make fine hardware, including knives, scissors, and needles. They make many scientific instruments, and also flying machines, steel cars, motor boats, and automobiles.

Germany makes laces and embroideries and exports to the United States millions of dollars' worth of machine-made lace. It has vast cotton mills fed by our Southern plantations and woolen mills that export their goods to all parts of Europe and the United States. The sheep of Saxony, where we are now, have fine wool, and in our dry goods stores one can buy the beautiful Saxony yarns used for crocheting and knitting.

Saxony is more thickly settled than almost any place in the world except parts of China, and one can easily see why as he travels over the country. In the first place, the land is rich, and in the southern part of it are the Erzgebirge (ěrts'gē-bīr-gē), or ore mountains, which are filled with minerals of various kinds. There are large coal fields hard by and manufacturing can be done cheaply. Moreover, the people have long been engaged in industries of many kinds and are skilled in handling machinery.

We see this in Chemnitz, a city that has been called the Manchester of Germany, for it does almost as much spinning and weaving as Manchester, England. We visit the mills in the city and in the villages near by.

As we go on through the manufacturing regions we are surprised at the many goods made outside the factories. In some parts of Germany it is hard to find a village or even a house where the people are not making something for sale. We saw thousands of workshops in the cellars of Berlin,

and we have found vast numbers in all the smaller towns and villages.

In some houses they are weaving the most beautiful silks, velvets, and plushes on hand looms, and in others making woollens and linens in the same way. Here they are knitting stockings, there stitching clothing, while a little farther on we find men and women busy pounding out nails and carving beautiful things from wood.

In the Thuringian Forest, for instance, there are thousands of men, women, and children who live by making toys, and it is the same in and about the quaint old city of Nuremberg, Bavaria. Germany sells more toys than any other country, and until the World War this industry was largely dependent upon our Christmas trade.

The toy makers live in mean little houses. Many of them have but two rooms, and the air within is filled with the smell of the fresh paint of the toys drying on boards laid on the stove. The girls working on toys get only a few cents a day, and the men making mouth organs get less than our common laborers. In the large establishments the wages are higher.

But suppose we enter one of the doll factories. We first visit the room where cheap wax dolls are made. The bodies are of coarse white cloth stuffed with sawdust, and the heads, arms, and legs are of papier-maché coated with wax. The different parts of the dolls are made in different houses, and many hands may be engaged on one doll. Certain workmen cut the arms and legs out of wood and others may mold the heads from papier-maché. Others dip the arms and legs into basins of pink dye to give them a flesh color, while others paint the eyebrows, lips, and hair on the heads; or if the dolls are to have something better than painted hair, mohair or real hair is glued on. There

are other workmen who melt glass tubes over gas flames and blow the doll's eyes into shape. Others fasten the eyes into the heads. So you see a doll that costs only fifty cents requires the work of many people, before it is finished and dressed in its coarse cotton chemise ready for sale. Since the World War we have been making many of the dolls and other toys sold in our markets, and we have imported many also from France and Japan.

The Harz Mountains are one of the chief mining districts of Germany. They contain all sorts of ores, and there are other regions, such as the Erzgebirge, the Thuringian Forest, along the Rhine, in the valley of the Ruhr, and in Silesia, where coal, iron, zinc, and other metals are found. Germany is the third largest coal and iron producer of the world, and it has the richest silver mines of all Europe.

And so we go on traveling about from one part of Germany to another. At Meissen, near Dresden, we learn how the famous Dresden china is made; in Krefeld (krā'felt), on the west bank of the Rhine, we see looms weaving silks and velvets; and at Essen, on the east bank of that river, we visit the vast steel works of Krupp, where are hundreds of acres of iron foundries and rolling mills, with a forest of smokestacks filling the sky with dark clouds. The shops are the largest in Europe, and some of the machinery is so massive that a single hammer weighing fifty tons is said to have cost a half million dollars.



XXXIV. UP THE RHINE TO SWITZERLAND

WE start to-day on a trip up the Rhine to the Republic of Switzerland. The Rhine is one of the most important rivers of Europe although by no means the largest.

The Danube is twice, and the Volga three times, as long and their volumes are greater. Still, the Rhine is more important than either of these streams, for it flows through the busiest part of the continent, with all parts of which it is connected by canals, and forms a great commercial highway to the ocean from the south to the north.

The sources of the Rhine are in the snows of the Alps. It flows from under a glacier on one side of Mount Saint Gothard near the source of the Rhone, and not far from where the railway tunnel has been cut through from Switzerland to Italy. The glacier lies about a mile and a half above the level of the sea, and the stream is fed by many other milk-white glacial streams, as it dashes along down the mountains into Lake Constance. It comes out of that beautiful lake only to take another tumble at Schaffhausen (shäf'hou-sĕn) over the greatest falls of Europe, and then moves slowly on to Basel (bä'zĕl), where it turns to the north, furnishing a safe and deep waterway clear out to the ocean.

The Rhine carries much of the commerce of France, Germany, Belgium, and Holland. Thousands of vessels are always moving upon it, and the traffic is almost equal to that of the rivers of China. There are steamers carrying wine, grain, and merchandise of all kinds, some of which are loaded with freight to be carried on the railroads which pass through the tunnels of the Alps into Italy. There are barges coming upstream filled with merchandise, food stuffs, coal oil in barrels, cotton, and other raw materials from the United States, and some that contain manufactured goods going down on their way to Rotterdam, from which they will be sent on the ocean steamers to New York. The boats carry also merchandise from the Mediterranean countries and the Balkan Peninsula. Canals to the Meuse

connect the Rhine with France and Belgium. They also connect the Seine with the Danube by the Rhine and its tributary, the Main.

The Rhine has played a great part in the history of Europe. Before railroads were constructed it formed the easiest trade route from Italy and the Orient to central and northern Europe. Silks and other goods from Asia and Africa were sent across the Mediterranean Sea and through the Adriatic Sea to Venice, whence they were carried on the backs of horses and mules and sometimes of men over the passes in the Alps to the Rhine. They were sent by boat down that river, reaching all parts of northern Europe and especially the rich industrial regions of Holland and Belgium about its mouth. Goods from the north were sent back in exchange, so that for generations a steady stream of merchandise and traders passed up and down.

In the time of the Romans, the Rhine had its important cities and towns. Caesar led his soldiers along its banks, and Charlemagne fought many battles in its mountain-walled valley. Napoleon Bonaparte marched his armies back and forth across it, and during the World War the conquest of the Allies and the United States led to the occupation by their armies of a strip of German territory, about thirty miles wide along the east bank.

The Rhine forms a part of the boundary between Switzerland and Germany, and until the Germans conquered the French in 1870, it was the boundary between Germany and France. At that time the Germans took from the French the province of Alsace-Lorraine, on account of the rich mines of coal and iron that it contained.

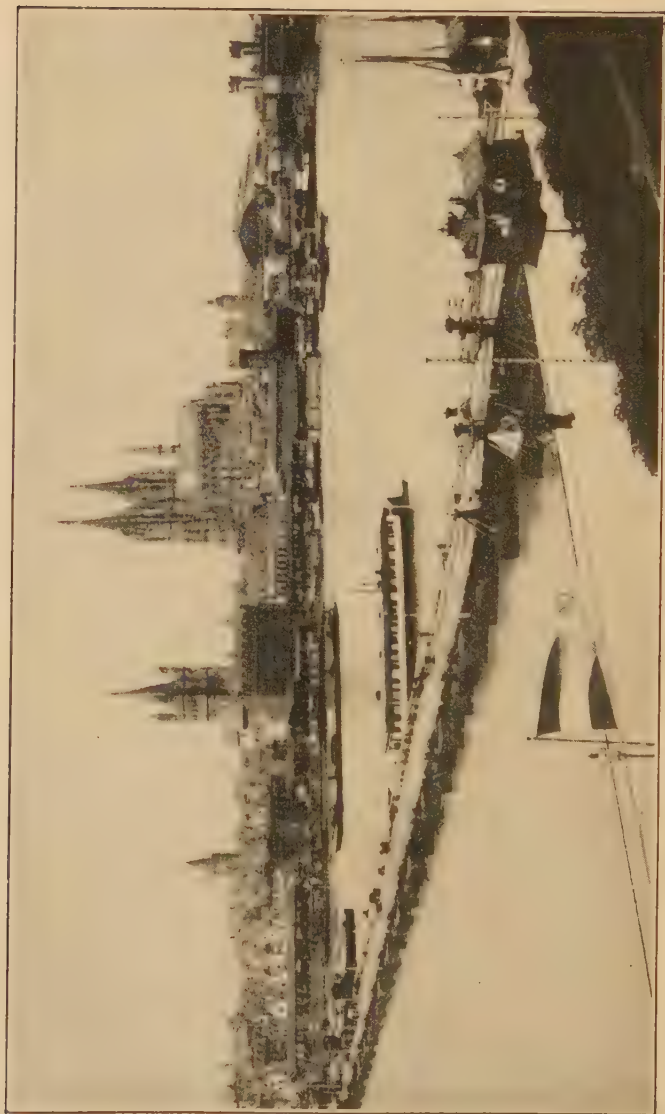
The World War ended when peace was declared in 1919, and at that time Alsace-Lorraine came back to France, so that it is now part of that country. By the treaty

of peace it is provided that the German forts along the river, the bridges, and the strip along the west bank as well as a strip thirty miles wide along the east bank shall be occupied by the troops of the French and their allies until the terms of the treaty are carried out. Soldiers of our army are among the troops who have been guarding the Rhine valley.

Our Rhine journey begins at Cologne (kō-lōn') on the west bank of the river. This is the chief commercial city of the Rhine basin. It is larger than Pittsburgh and, like Pittsburgh, the region about the city is spotted with smokestacks and foundries. Near by are some of the richest coal fields of Germany, and manufacturing of many kinds is carried on.

Cologne is an old city. It belonged to the Hanseatic League, and at one time during the Middle Ages it had as many as eighty thousand weavers. We take a view of the city from one of the spires of the cathedral, climbing round and round up the steps inside the tower, until we are almost as high above the ground as the aluminum tip of the Washington Monument. We are now looking down upon one of the largest cathedrals of Europe, and upon one which has cost almost as much as our Capitol at Washington. From its spire we can see the Rhine winding its way about the city which stretches out over the plain at the back. The city seems new instead of one of the oldest in Europe, and its fine streets reach out in every direction.

Leaving the cathedral, we shop a while at the stores before we go on our steamer. Can you guess what we buy first? Think where we are and you will guess right. We lay in a good stock of cologne. The city is famous for its toilet water. It buys flowers and their extracts everywhere, getting some even from Grasse, in southern France.



Cologne, showing the bridge of boats and the great cathedral

Cologne has two score merchants who deal in cologne. They sprinkle the scent upon us to show its sweet smell. We are clothed in perfume as we leave the stores and stroll down to the Rhine, watching the shipping and talking to the boys who are fishing off the great bridge of boats, as we wait for the leaving time of the steamer.

Now we have gone on the boat and are steaming off up the Rhine. We soon leave Cologne and after a time can distinguish only the tall spires of its cathedral. How fresh the air is and how beautiful the scenery! The river has grown narrow and we are coming into a region of hills whose slopes are covered with vineyards. The soil of the Rhine produces excellent grapes, and every patch that can be cultivated has its grape vines. The hills are terraced, and the mountain sides seem to be made of green steps, each step filled with vines tied to stakes. In some places it is so steep that the earth is held up by stone walls, much of the soil having been carried up from below in baskets on the backs of women and children. The fields are often no bigger than bed quilts, and sometimes they run in long strips along the sides of the hills.

What is that odd building on the rocks at the left? It is a huge stone structure with a high tower whose little windows seem to have iron bars. It is half fallen down and does not look as though any one lived in it now. That is the ruin of one of the castles of the Middle Ages. It was once the home of a baron who lived there with his soldiers and made the poor people give him support. Now and then he went down with his troops and preyed upon the merchants who traveled up and down the Rhine. There is another castle on that rock at the left, and as we go on we shall see scores of such ruins.

The steamer stops some time at Coblenz, which was



The Mouse Tower in front, with terraced vineyards in the background

occupied by American soldiers for a time after the World War. It is a beautiful city at the junction of the Rhine and the Moselle (mô-zêl') rivers and is one of the chief military fortresses of the Rhine valley, having a great fort on a rock four hundred feet above the level of the river.

Shortly after leaving Coblenz we wind our way through the hills and come into a place where the river narrows, seething and foaming as it dashes by the Lorelei Rock. This rock is said to have been the home of a wicked maiden who sat there combing her beautiful golden hair and singing. She was beautiful and her song was so sweet that the sailors forgot to manage their boats as they listened, and she lured them on and on until they were dashed to pieces against the rock.

Still farther upstream we pass Bingen (bĭng'en) — "Fair Bingen on the Rhine!" — and on a rocky island in the river near by see the Mouse Tower where, according to the story, the cruel Bishop Hatto was eaten alive by rats. You may read about it in Southey's poem.

A little later we reach Mainz (mĭnts), opposite where the river Main flows into the Rhine. Here we leave the boat and visit the house where Gutenberg, the first printer, was born, and then take the railroad for the large city of Frankfort near by.

Frankfort-on-the-Main is one of the chief business cities of Germany. It was for years one of the richest cities of Europe, and its bankers have often loaned money to kings.

We go to see the Gutenberg monument in Horse Market Square and then take a train for Strasbourg, the capital of Alsace-Lorraine. Strasbourg was founded by the Romans, and in the Middle Ages was one of the most prosperous of the free German towns. Then the French took it, and in the War of 1870 the Germans recaptured

it and held it until the World War, when it again came under the rule of the French. It is now the chief French port of the Rhine, a large part of the traffic between France, Germany, and Switzerland passing through it. The city is cut up by canals, among them the Rhine-Marne Canal, which connects the town with the waterways of France. The port covers more than three hundred acres, having wharves on the Rhine, two miles away.

Leaving Strasbourg by railroad, we travel a short distance along the banks of the Rhine to Basel in Switzerland, where we end our Rhine journey. The river has still much shipping, and we are greatly impressed with its importance as a trade route and as one of the most useful of the commercial highways of Europe.

Compare Germany in size with France; with Spain; with certain states of our Union. What other European nation has a greater population?

What is the difference between north and south Germany. In surface? In soil? How is the poor sandy plain made to produce good crops?

Describe Germany's trading position. What does Germany sell to us? What do we sell to Germany?

What advantages has it for manufacturing? What important minerals has it? Describe a trip to the potash mines.

Where is the chief steel-making center of Germany? Where are the coal and iron mines?

Name ten large cities of Germany and compare them with cities of the United States in size. Describe Berlin, and Hamburg. For what is each noted? How long would it take you to go from Berlin to Paris? To Moscow? To Constantinople? How many miles would you travel in making each trip? Describe the route.

For what is Leipzig noted? Dresden? Frankfort? Stettin? Lübeck?

Make a trip up the Rhine and tell what you see.

What city on the Rhine has the same name as well-known perfumery? What perfumery center did we visit in France?

Of what country is Strasbourg the capital? Find out all you can about that country and by whom it was governed before the World War. Mention some of its minerals, and tell why they are important.

Make a trip by water from Hamburg to Vienna. By two water routes to Paris; to Berlin; to Prague; to four important American ports.

Visit the Thuringian Forest and tell how they make dolls and toys there.

Suppose you had a telegram to hurry to Hamburg, how would you go? How far would you have to travel? How long would you be on the way? Suppose the telegram said Berlin, how much longer?



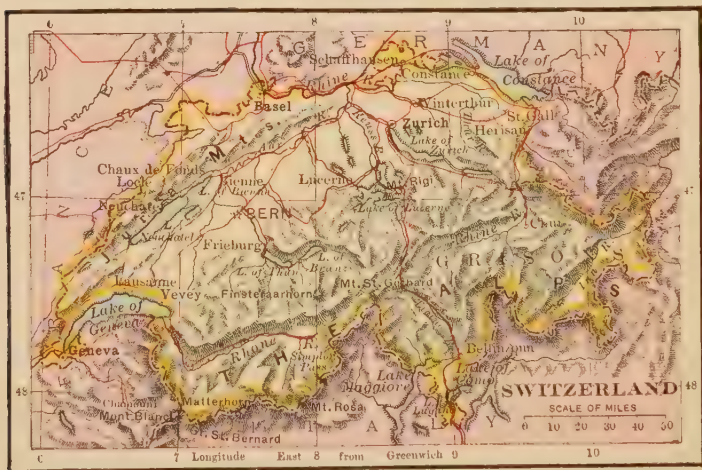
XXXV. SWITZERLAND — THE ALPS

PUT on your rough clothes this morning and leave your heavy baggage behind. We are going through the mountains of Switzerland, and much of our travel must be on foot. Each must carry his own knapsack, and the most sensible of us will take as little as possible. A waterproof, an extra suit of underclothing, some handkerchiefs, and woolen stockings, together with a comb and hair brush and tooth brush will be quite enough. We shall each need an alpenstock, a strong pole with a steel point on its end, to aid us in climbing the mountains and in walking over the ice, and also smoked glasses to shield our eyes from the glare of the snow. Our guides will have ropes to tie us to them while passing over the dangerous places, and axes to cut steps into the walls of the glaciers and up the ice banks of the mountains.

Switzerland is the most mountainous country of Europe. It contains the highest ranges of the Alps. It has thirty peaks over two miles in height, several about three miles,

and many clad with perpetual snow. It has great glaciers or ice-streams which fill the valleys extending down into the green pastures and forests below.

The area of Switzerland is not great. It has almost twice as much land as Massachusetts, and one third of it is ice and bare rocks. Another third is covered with forests, but here and there in the woods, in the valleys,



and often high up in the mountains there is good pasture. The remaining third contains most of the people, and consists largely of a narrow lowland running across the country from Lake Geneva to Lake Constance. There are many small farms and vineyards, but of the whole country not more than one ninth can be cultivated.

This proportion seems small, but nevertheless, Switzerland is one of the most important parts of the European Continent. Its mountains condense into rain and snow the moisture of the winds that blow against them, and thus become the cradles of important European rivers. The

Rhine has its beginning upon one slope of Saint Gothard, leaping forth from a glacier in a brook so narrow that we jump across it with our alpenstocks. A few miles westward on the same mountain, so near that we walk from one place to another, is the great glacier out of which pours the Rhone. To the east are sources of the Danube, which forms an easy trade route through southern Europe to the Black Sea; and down the southern side of the mountains flows the Ticino (*tê-chē'nō*), the chief feeder of the Po, the principal river of Italy. These and other streams from the Alps drain a vast territory. They have much to do in making Europe the most productive of the continents, and they are all dependent on the mountains we are climbing.

Could we take an airplane and fly about over Switzerland, we should see that the Central Alps and the Jura, with some highlands between them, comprise the whole country. We should see that the Alps rise from the plateau in several ranges, and that they have many cross valleys. We should see that Mount Saint Gothard is at the center of the chief dividing mass, with the deep trench or valley of the Rhine down one side of it to the northeast, and that of the Rhone running down the other side to the southwest. As we allow the airplane to sink lower and hover over the masses of snow, we should see that the mountains are cut up into all sorts of strange shapes. Here there are deep gorges with rocky walls half covered with green; there silvery lakes surrounded by snowy peaks that mirror themselves in the waters, and foaming cascades dashing down over the rocks fill the air with diamonds, as the sun shines upon them. Scattered throughout the whole are emerald meadows, and smooth uplands spotted with flowers, and indeed so much beautiful scenery that people come from all



This great glacier, which is the source of the Rhone, is about six thousand feet above the sea

over the world to enjoy it while they breathe the life-giving air of the mountains.

Switzerland is often called the playground of Europe. Tourists from everywhere come by the thousands to visit it. There is no region which has not its hotels, and even on the top of Mount Rigi (rē'gê), and several others of the high Alps, we can find comfortable quarters. The tourists spend so many millions of dollars in Switzerland every year that the people have made good roads to accommodate them. There are motor-car roads over the passes, and railroads to all the principal places. Long tunnels have been cut at Mont Cenis (môn sê-nē'), Mount Saint Gothard, the Simplon Pass, and in other parts of the Alps, to carry passengers and freight to and from Italy. These tunnels and the railroads which go through them bring the Mediterranean and the North Sea within a few days of each other. Before they were built, most of the goods were carried to western Europe around through the Strait of Gibraltar, or to Marseilles, and across France by rail. Other tunnels are building, so that now Switzerland has more than six hundred tunnels either in operation or under construction. Some are ten or more miles in length.

The Swiss have built cog railroads by which one can ride to the top of the highest mountains to see the fine views. These roads are similar to those we have at Mount Washington and Pikes Peak. There are so many of them that Mark Twain has said there is scarcely a great Alp that has not one of these railroad ladders, running up its back like a pair of suspenders. This, of course, is an exaggeration. Some of the mountains have glaciers which cannot be crossed by the railroads, and some of the most interesting places must be visited on foot.

We take the railroad at Basel and ride over the high

places to the foot of the Alps. There we leave the railroad and tramp on our way up one mountain after another through some of the grandest scenery known to the world. As we go up the air grows colder. We soon leave the cultivated farms and vineyards, and climbing higher and higher, pass through forests of beeches, chestnuts, and walnuts. Now we walk along the side of the mountain, looking down upon a beautiful valley spotted with farm cottages, and now we ascend into the highlands, where there are only forests of fir and pine trees, and little pastures with cows, sheep, and goats feeding upon them. Higher still the trees disappear, and shrubs and strange flowers are to be seen. There are many bushes, Alpine roses, and creeping azaleas. The grasses are shorter now, but smell so sweet that we do not wonder that the cattle and sheep readily eat them. We find small, brilliant flowers among the rocks; deep blue, light pink, and delicate purple blossoms are everywhere growing. This is so even to the snow line, which we reach at a mile and a half or a mile and three quarters above the sea.

When we left the lowlands we were in midsummer. Here we seem to be in midwinter, save that at midday the sun is hot and we perspire as we climb. There is snow all around us. It banks the paths, covers the rocks, and on the higher levels fills all hollows. We see it melting under our feet, only to freeze again at night and turn the pathway to ice. How cold it is when the sun sets! The air is damp where the wind blows over the snow. We frequently see white clouds float down upon us from above our pathway and wrap us in mist. Now they are thicker, and we are walking through a light rain. Now the sun sends its rays through them, and we are warm again.

Near the tops of the mountains we have to travel slowly. The air is so thin that we sometimes gasp for breath, and

when we try to throw snowballs at each other, way up here above the clouds, our hearts throb with the exertion. Our feet grow heavy, and we can run only a few steps without tiring. Much of the way is so dangerous that we move along in single file, each bound in one of the loops of a long rope which is tied to the guide. This is done so that, if one of us should slip, the others would hold him back from dashing to pieces over the dizzy precipices along which we are crawling. We are also tied together when we cross the ice-wastes where there are cracks hundreds of feet deep. If one of us fell into one of these cracks, we should find it most difficult to pull him out.

The views are indescribable. At the foot of the mountains we see silvery lakes in nests of green hills, walled with these snowy peaks, which mirror themselves in the waters. In the gorges, roofed by the blue sky, rocks, half moss-covered and scarred by glaciers, rise precipitously for a thousand feet, and at the bottom roar rivers of milk-white glacier water as cold as the icy caves where they are born.

Standing upon the peaks, we can see snowy mountains, one towering over the other, until they are lost in the blue sky of the horizon. Under them is a jumbled mass of green forest and gray rock, and below the snow line the glassy lakes and streams reflecting the snow, and the green pastures spotted with the cattle and homes of the peasants, while still farther down, with our glasses, we can see the towns and cities of the plains.

Some of our most interesting journeys are over the glaciers, the great snow rivers of the Alps. They are masses of ice and snow filling the gorges high up in the mountains, and slowly, slowly moving down into the valleys, writing their diaries upon the rocks and earth through which they pass. Switzerland has hundreds of these ice rivers.

A good place to study them is in the valley of Chamouni (shā-moo-nē'), high up on the side of Mont Blanc (môn blān). The summit of the mountain is just over the border in France, but so much of its slope is in Switzerland that some people think it belongs to that country. It is, with the exception of certain peaks of the Caucasus, the highest mountain in Europe. It is about a thousand feet higher than Pikes Peak, or Mount Whitney. Its snow-clad summit is fifteen thousand, seven hundred and eighty-one feet, or almost three miles, above the sea, and high above the valley of Chamouni, into which sixty-four of its great glaciers drain.

We walk across the Tête Noire (tāt nwär) Pass to Chamouni, and stay at one of the hotels to get an early start for the glaciers. The sun is just rising when we come to the huge walls of ice beyond the terminal moraines. Our guides cut steps in the ice, and climbing up, help us along by the ropes they have tied round their waists. It is hard work, and our hands are sore with the pulling; they are cold where we have seized the ice to hold on, but at last we reach the top and stand on the glacier.

The top of the glacier is rough with little peaks here and there. It has many wide cracks and crevasses, some of which are hundreds of feet deep. We lean over and hear the water rolling along away down there under the great frozen mass. There are streams of ice water flowing into the cracks and crossing the glacier this way and that. Here is a pool, and there is a deep crevasse half filled with melted snow. We get down on our knees, and take a drink from the pool, and then start over the glacier. We drive the steel points of our alpenstocks into the snowy white surface to steady ourselves, although we are tied with ropes to one another and to the guide. In single file we thus

make our way up the frozen river, now jumping a crevasse, now winding about to avoid the larger ice mounds, and now skirting the banks or moraines, the masses of bowlders and clay which the glacier is carrying along as it moves on its way.

And is the glacier moving? Let us stop and watch it. We hear a great crack now and then, and sometimes a stone rolls down from the mountains; but we see no signs of motion in the icy river under our feet. And still it is moving now as it has been moving for ages. This glacier is one of the oldest travelers of history. It began its journey centuries ago, and it will probably go on for ages to come. It is traveling at the rate of two feet per day, or about an inch every hour.

Be careful how you jump that crevasse! If you should slip you might be lost in the ice and by the rope to which we are tied pull us all down to destruction. That was the fate of eight travelers on one of these Mont Blanc glaciers in 1820. They were walking along just as we are, when one slipped and dragged the others down with him into the Grande Crevasse, which was two hundred feet deep. The snow covered their remains, and it was not until about forty years later that their frozen bodies began to appear at the lower end of the glacier. In that time they had traveled about five miles, or six hundred and eighty feet per year, borne along in the glacier.

After exploring the Mer de Glace (mâr dĕ glâs), or Sea of Ice, and other glaciers about Chamouni, we ascend the Rigi and other mountains by cog railroads. We travel under Saint Gothard through its famous tunnel, ten miles long, to the south side of the Alps, and make our way back by automobile over the Saint Bernard Pass.

We spend one night at the Hospice, a large stone house

high in the Alps, where we are entertained by the monks. They are kind-faced men, with shaven heads, in cowls and long gowns. They live here, high in the Alps, all the year round, to succor travelers who are lost in the



One of the famous dogs trained by the monks of Saint Bernard to succor travelers lost in the mountains

storm. They show us the huge Saint Bernard dogs which are trained to hunt for persons who may have been lost in the snow or knocked senseless by an avalanche or a stone falling down the mountains. Every day during the winter

these dogs are sent out, each carrying some food and a bottle or small keg of brandy about its neck. When they find a lost traveler who is unconscious they endeavor to arouse him; they sit down beside him and howl for their masters or perhaps run back to the Hospice and lead them to the spot.



XXXVI. THE SWISS PEOPLE AND HOW THEY ARE GOVERNED

WHAT a busy country Switzerland is! It may be the playground of Europe, but it is the workshop of the Swiss. Every one of the natives seems to be busy. The men are doing all sorts of work, and the women knit and make lace even while they are resting from their other labors. All are well dressed according to their station. The cities are clean and well kept. The houses have gardens about them in which are roses and other beautiful flowers; the stores are filled with fine goods, and the surroundings are generally those of comfort and thrift. The Swiss, although there are about four millions of them in their little mountainous country, are among the most prosperous people of Europe.

How do they do it? In all sorts of ways. They are skilled in manufacturing and trading. Their little country is surrounded by rich nations and they have commerce with all of them, exporting millions of dollars' worth of goods every year. They export vast quantities to the United States, and there are tens of thousands of Swiss men, women, and children who are kept busy working to supply the American market with certain kinds of goods, as we shall see in our travels. The Swiss are now one of



A street in Bern, the capital of Switzerland

the chief manufacturing nations, and this is true although they have no coal mines and most of their raw materials for manufacture come from abroad.

For a long time they imported coal to make steam, but now they are using electricity from the water power furnished by the turbulent streams of the mountains, and this power runs many of the railroads and tramways and moves thousands of factories and mills of all kinds. The water powers belong to the people and the electricity is generated by the government and furnished at low cost. There is so much power that it is estimated that the amount that can be easily used is equal to one million horse power, and that already employed is equal to hundreds of thousands of horse power. Most of the railways are now being electrified. Nearly every village is lighted by electricity, and more than two thirds of the homes have electric lights. In some districts the country roads are lighted for miles and power is furnished to the people who have little workshops in their homes. In the cantons about St. Gall (săn gal'), Zurich (zoo'rik), and Basel, nearly every one is engaged in making silks and silk ribbons. A great deal of this work is done at home, the looms and machines being moved by electric motors. They thresh their grain by electricity, and churn their milk and pump their water by the same force.

Some of the water powers are also being used to make nitrates from the air, and this important fertilizer may add greatly to the fertility of the country. It will take the place of the nitrate of soda now imported from Chile, and the Swiss may in time be able to raise all their food.

Switzerland buys of the United States much of the copper and other metals used in her electrical machinery, and a great deal of the raw cotton employed in making her beau-

tiful embroideries, curtains, and laces comes from our southern states. We sell her petroleum, flour, meat, and various food stuffs. At the same time, we are the best customer of all the nations for Swiss embroideries. At St. Gall we may see tens of thousands of women and girls making the laces and edgings we use on our clothing, and the beautiful lace curtains that hang in our windows. They have been making embroideries at St. Gall for many generations and the people are skillful in designing new patterns. The country about has excellent water for bleaching. The water comes from Lake Constance and other sources and has aided in building up a great industry here, just as the pure water in northern Ireland has helped the manufacture of linen in that country.

Basel on the Rhine is famous for making fine ribbons, and Zurich is the center of silk weaving. Much of the raw silk used is brought over the mountains from Italy, and some of it is raised from cocoons spun by the silk worms of the Swiss valleys on the southern side of the Alps. The city of Geneva is famous for its music boxes, jewelry, and watches.

The Swiss make watches which are very costly on account of the ornamentation and jewelery of the cases, and several million dollars' worth of Swiss time pieces are sent to the United States every year. The fine watches are manufactured largely by hand in the homes of the people. In some places the work is subdivided. One family makes the wheels, another the pivots, and another polishes the parts. This is true of one little town of about thirty thousand which produces three hundred thousand watches a year. There are also factories making watches which sell at very low prices. Cheap Swiss watches are exported to all parts of the world. In many of the towns of the Jura

Mountains they make clocks, and in other places they carve wooden toys which are shipped far and wide.

Indeed, it is wonderful how many things are made in the villages. Each settlement has its specialty. One may work in leather, another in wood, and others in turning out things of metal by machines and by hand. There is one canton that raises snails for sale, and another on the south side of the Alps that breeds silk worms. There are some little villages where the boys learn special trades and go to other parts of the world to practice them. One town may send out masons and glaziers, another fine pastry cooks, and others supply waiters for the big hotels all over Europe.

As we travel through Switzerland we see the people everywhere farming. Their country is so small that they have to import much of their food, but they raise all they can. There are three hundred thousand farmers and nearly every family owns some land. We find patches of cabbages and potatoes and hay fields and pastures almost to the line of perpetual snow. Every bit of the plains and valleys is given up to orchards and vineyards, grain fields and hay fields, and everywhere there are gardens in which all sorts of vegetables are raised.

We are surprised at the smallness of the farms in the mountains. Some of the fields are no bigger than a bed quilt, and others so steep and rocky that they cannot be plowed, but are dug up with spades and hoes. The grass must be cut with sickles and scythes, and carried to the barns on pitchforks or in blankets or baskets on the backs of women and men.

We see women and children at work. They tend the cows in the mountains, knitting as they keep them from straying. They carry loads on their backs over the roads,

and on some of the farms they really seem to be beasts of burden. A little farther on we see some girls picking up stones, and near them two women are spading the sod. Just across the road a man and a woman are planting a field, and still farther down, an ox cart driven by a boy is climbing the hill.

The chief pastures of Switzerland are high up in the mountains. The country is famous for its excellent butter and cheese. The grass is so rich and so sweet that the cream and milk are fragrant and delicious. There are more than two thousand dairies which make cheese for export, and millions of pounds of Swiss cheese are annually shipped to the United States. The cheese is of many kinds, but there is one variety, called "Emmenthal," a single one of which will weigh almost as much as any two of our party. There are smaller cheeses of various shapes. Switzerland makes large quantities of condensed milk for sale to other countries, and she sells to the United States several million dollars' worth of milk chocolate a year. We can buy it in almost any confectionery store.

As we go on through the mountains we see flocks of goats here and there feeding. They are milked to make cheese. Everywhere we hear the tinkle, tinkle, tinkle of the bells on the necks of the cows. In some places the pastures are held in common by the village near them, and the cows are sent out under the care of the village herdsman. He drives them to the highlands in the spring, going higher and higher as the snow melts, and coming back gradually in the autumn as the snow falls. Sometimes this man has a dairy away up in the mountains where he makes butter and cheese, which is sent down to the village. He has a house in the mountains and lives there with his cows. In the farms farther down the cheese is often made in the liv-

ing room of the family, and the women form a part of the cottage, the cows being under the same roof with the people. In some cases the men and boys go up with the cows and stay there all summer, the women being left in the valley to cultivate the vineyards and crops.

In the highlands many of the houses are of only one story, with low, wide overhanging eaves over which flat stones are laid to keep the heavy wind from tearing them off. Almost all the houses are of wood, and many of them with gables. They have roses and other flowers about them and are often covered with vines.

The fashions of the lowlands, and especially of the cities, draw much like the other people of Europe, but in the mountains there are many strange customs. The women wear short skirts and have their arms bare to the elbows. They have upper coats decorated with big silver buttons and chains for dress ornaments, and headpieces of cotton and lace which vary in the different cantons. The men often wear buttons in their hats and velvet-lined coats with great silver buttons.

Switzerland is the oldest of the republics now in existence. Long before America was discovered the Swiss governed themselves, and interesting stories are told of their independence and pride. We have all heard of William Tell; now he refused to bow down before the cap of Gessler, the Austrian governor, and now, as a punishment, he was required to shoot the apple off his little son's head in the market place of Aarau near Lucerne. He did shoot at the apple and hit it, but he had also another arrow, with which he expected to shoot Gessler if he had wounded his son. These are people who will tell you this story is not true; but the Swiss, who should know, believe it, and in Lucerne celebrations in honor of Tell are held every year.



Every public school has its gymnastics

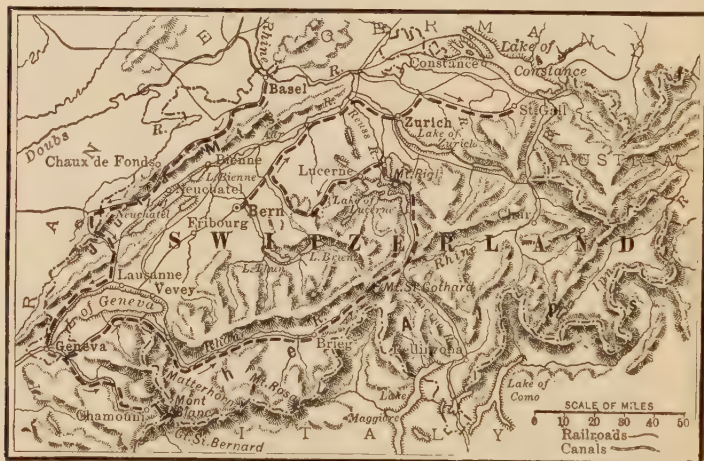
The Republic of Switzerland is somewhat different from ours. The country is divided into twenty-two cantons or districts, each of which elects members to a national congress which sits at the capital, the city of Bern. These little cantons correspond to our states, but they have different ways of ruling themselves. In certain cantons the men all meet at a fixed time in a large field, and there, out on the grass, they elect their officers and make the laws. In the larger cantons they choose men to make their laws for them, but even there important things must be voted on by the people themselves.

The national congress regulates matters that concern the whole country, having much the same powers as our Congress. It even elects the president and vice-president, and makes all treaties and provisions for the defense of the nation. Switzerland has fortifications at the passes over the Alps, and also in some other places. According to law a standing army cannot be maintained within the country; but every Swiss must serve as a soldier for a part of his life. Each public school has its gymnastics and military drills, in which the boys, beginning at eight years of age, are taught to bear arms. So if the nation should be attacked, it could at once put half a million men in the field.

The Swiss have a good postal system. They have such excellent schools, and so many universities, that they are among the best educated and most intelligent people of Europe. Nearly every one speaks two or more languages, for the nation has no language especially its own. In the cantons of northern and eastern Switzerland many speak German; in the districts nearest France they speak French; and on the southern side of the Alps Italian is the most common language. There are so many American and

English travelers that English is taught in the schools; and we find people everywhere with whom we can talk.

We like the cities of Switzerland. There are not many of them, for most of the people live in small towns and villages. Zurich is the largest city, then



Our travels in Switzerland

comes Basel, noted for its manufacture of ribbons, paper, and dyes and also for its *Baseler leckerli*, or sweet cakes.

We stop awhile at Geneva to see them make watches and music boxes and then go on to Bern, the capital of Switzerland. Bern is a quaint, old-fashioned town, lying under the shadow of the Alps on both sides of the turbulent river Aar. Its streets run up hill and down, and the houses of the upper level sometimes hang out over those below. Many of the buildings are of gray stone, with roofs of red tiles. The stores front on arcades or cloisters, which seem as dark as a pocket when you enter them from the dazzling sunlight outside. Beside the doors, out in the arcades, are benches

or chairs, on which women sit knitting while they sell toys, fruit, and laces.

During our stay here we go to the Federal Palace to call upon the President. We visit the public gardens, and stop for a moment before the hideous statue of the Child-eating Ogre. This is a figure of a giant sitting on a stone column, with a bundle of babies beside him. He has taken a baby out of the bundle with his right hand, and is putting it into his mouth, while the other little ones calmly wait their turns to be eaten.

We next visit the bear pit, a well with a railing about it where huge bears are always kept by the city, in honor of its name, "Bern," which means bear. For the same reason, there are stone bears ornamenting many of the buildings, and also the procession of little wooden bears which every hour comes out of the great clock on the tower in the center of the city. As the clock strikes, a cock claps his wings, and crows, and then the bears come forth, and bow their heads, as they march about a figure of old Father Time, who reviews them. We buy some bread and apples from an old woman, near the bear pit, and feed the live monsters, which stand on their hind legs and catch the food in their mouths as it falls.

Later on, at a shop near by, we buy gingerbread bears, and bears of white candy with red peppermint tongues, and also toy bears of brass and carved wood, to take home as mementos of Bern.

Locate Switzerland and name the countries which surround it. Compare it in size with other countries of Europe. Which of the United States is about twice as large?

Of what great mountain chain is Switzerland a part? In what country is the highest peak of this chain? What four great rivers rise in the Swiss mountains?



Zurich, the largest city in Switzerland

What is a glacier? Describe the trip across the Mer de Glace. Compare the Swiss glaciers with those of Alaska. (See Carpenter's "North America.")

How does Switzerland connect with Italy by rail? Name some of the tunnels, and give their advantages to trade.

What peoples inhabit Switzerland? Mention the three principal languages.

What are the chief industries of Switzerland? Describe the journey of a Swiss cheese from Bern to New York via Liverpool. Follow a barrel of flour from Minneapolis to Geneva, landing at Rotterdam and going as far as possible by water.

What takes the place of coal to create power for Swiss manufacturing? Why should we expect to find this power in Switzerland? What other European countries have much of this power? In what way may this power add to the fertility of the Swiss farms? What South American country has vast supplies of this fertilizer? (See Carpenter's "South America.")

What are the chief exports of Switzerland to the United States? Mention some things that we send to the Swiss.

Suppose you were ordered to go from your home to the capital of Switzerland by way of Paris, what route would you take? What would be the shortest mail route for a Swiss watch sent by parcel post from Geneva to Chicago?

Why is Switzerland called the playground of Europe?



XXXVII. IN CZECHOSLOVAKIA

WE are in the capital of a new country this morning. We have left Switzerland and come by rail across southern Germany to Czechoslovakia (chĕk-ō-slō-vă'kĭ-a). On the way we stopped a day or so at Munich (mū'nĭk), the capital of Bavaria, and thence went north to Nuremberg, another old German town, where more kinds of toys perhaps are made than in any other place in the world. From Nuremberg it was but a short railway ride into Czecho-

slovakia and we are now comfortably settled for a few days in Prague (prāg), the largest city and the governing center of the republic.

Czechoslovakia consists of several provinces that belonged to Austria-Hungary before the World War, but by the treaty of peace became a separate republic. These provinces are Bohemia, Moravia, Silesia, and Slovakia, including the Tatra (tä'trä), a wild, mountainous part of the



Our route through Czechoslovakia

country that formerly belonged to Hungary. As a whole the republic is a long narrow strip of territory stretching from west to east between Germany and Poland and the northern boundaries of Austria and Hungary. It has no seacoast, but lies in the basins of the Oder, Elbe, and Danube, which are now open to the shipping of all nations.

The territory is mountainous, but has fertile basins and plateaus, and mines of coal, iron, and other minerals that make it one of the richest industrial and agricultural districts of the world. It comprises sixteen districts corresponding to our states, each of which is divided into counties. The chief officials are elected by the people, and both men and women have the right to vote.

As its name indicates, Czechoslovakia is inhabited chiefly by two races, the Czechs and the Slovaks, who came here from Russia ages ago and conquered the country. For a time they united and became a strong nation, but later on they were defeated by the Austrians and their country became a part of the Austro-Hungarian Empire.

Of the peoples, the Czechs are the more important. They are about three times the Slovaks in number. They inhabit chiefly Bohemia and Moravia, the western and central parts of the republic, while the Slovaks are found in the wild and mountainous lands of the east. The Czechs are highly civilized and skilled in commerce and industry. The Slovaks are more backward, and their chief business is farming and herding. The country has also many Germans and some Austrians and Hungarians. The Czechs are as well educated as any people of Europe, and their schools and colleges are famous. The schools number more than fifteen thousand; there are sixty agricultural schools and four universities.

The Czechs are fond of athletics, and hold gymnastic exhibitions in Prague every five years, in which both men and women and boys and girls take part. In one such meet there were five thousand women and girls among the athletes. The athletic clubs are known as Sokols. The word Sokol means falcon, and it is chosen because they think the falcon is the swiftest and strongest of all the birds; it means physical strength and courage and is the symbol of freedom.

We are now in Bohemia, the land of the Czechs. It is a basin surrounded by mountains. The basin is of the shape of a baseball diamond, and we might regard the mountains as a mighty grandstand overlooking the diamond. The country is covered with farms on which men and women are working. In the fields we see fine cattle, horses,



An old castle in the mountains of Czechoslovakia

and sheep, and now and then pass a great flock of geese. Bohemia is noted for its goose farming, and raises many of these fowls for shipment to Germany and Austria. It produces millions of pounds of beet sugar, and its barley and hops have made Bohemian beer one of the exports of the country. Potatoes are one of the principal foods, and large crops of wheat, oats, and rye are grown.

The hills of Czechoslovakia have many rich mines of coal and iron lying near each other, and we see the smokestacks of steel works in some of the cities. There are almost as many manufacturing towns as in Belgium. Nearly every home is a little factory of one kind or another. About Karlsbad, a large town in the western part of the country, famous for its mineral springs, we find the people making embroideries and trimmings, and near Graslitz there are more than fifty thousand women and children who make bobbin lace. In the same region they make brass horns, violins, and musical toys for export to the United States and the other countries of Europe.

Bohemia is noted for its glass, china, and tableware. The quartz sand in its mountains is fitted for manufacturing the finest of glass, and there is clay near Karlsbad just right for porcelain. The country also makes pearl buttons and artificial flowers, and wigs, braids, and nets of human hair. Much of the hair comes from China through the ports of Hamburg or Trieste. It is packed in bales wrapped with straw and is of all lengths, from six inches to almost one yard. The hair is first sorted according to length and is then bleached. The next process is dying it to the colors and hues of the heads of the possible customers. Nets are made of this hair by women and girls in their homes. Many of them are sent to the United States for sale.

We buy some pieces of cut and carved glass, and the girls

of our party purchase brooches, bracelets, earrings, and pendants set with colored glass or semi-precious stones. Bohemia is famous for its cheap jewelry and imitation pearls, rubies, sapphires, and diamonds. It is noted also for one real stone that is sold all over the world. This is the garnet, a rich red stone that comes from mines in the mountains. The earth-bearing gravel is washed, and the stones are sorted out by running them through a sieve. The garnets are cut and polished here in Prague, and we can see the cutters at work. They remind us of the diamond cutters we saw in Amsterdam. The flaws in the gems are first chipped off, using a steel chisel with a lead anvil, then one side of each garnet is ground smooth with emery powder upon a lead disc, so that the stone can be cemented to the end of a little wooden stick for cutting the facets. After cutting, the gems are polished and made into jewelry.

Garnets of less value are mined in many other countries. They are found mixed with the diamonds in the mines of South Africa, where they are known as "Cape rubies." We have garnets in different parts of the United States, but they are of such poor quality that they are ground to a powder and used for cutting other stones and for making sandpaper. Several thousand tons of such garnets are mined in New York State every year. There are also green, yellow, blue, and even black garnets, but the most beautiful are these fiery red stones of Czechoslovakia.

We are delighted with Prague. It has so many beautiful parks and gardens that it is sometimes called "The Rose of Europe." It is a clean business and manufacturing city, and it has many old buildings erected before the time of Columbus. The city owes its growth to being situated on the Moldau, a branch of the Elbe, at a place where the highways and railways come together. The Elbe gives a



A public square in Prague

waterway to Hamburg and out to the ocean, and upon this thousands of boats move back and forth. Prague is about one hundred and fifty miles by rail from Vienna and over two hundred miles from Berlin via Dresden.

The Moldau runs through the city, and there are nine bridges from one river bank to the other. We walk over the Karlsbrücke, built a hundred years before Captain John Smith landed at Jamestown, and in riding about, find palaces and modern public buildings mixed with old structures erected during the Middle Ages. The place has so many churches that it is sometimes known as "The City of One Hundred Towers." On the outskirts are great factories making railway cars, guns, and machinery, and also cotton goods, leather gloves, and beet sugar.

Leaving Prague, we make a rapid trip across Bohemia and then go eastward through Moravia into the land of the Slovaks, seeing something of the country and people. These lands lie in the basin of the Danube and are well drained by tributaries of that river. There are some large mines, but farming and stock raising are the principal industries.

The Tatra is one of the most beautiful parts of the Carpathian Mountains, and now that it belongs to Czechoslovakia it will probably have many tourists. It has dense forests, wonderful scenery, and immense caves much like Luray Cave in Virginia or the Mammoth Cave in Kentucky. There is one cave with stalactites that shine like silver and look like columns of marble. It has one chamber more than three miles in length, with another room half as long at the right. The floor of the cave would cover twenty good-sized farms, and has two streams of clear water flowing through it.

The Dobsina (dôp-shě'nô) cavern has a ceiling and walls of limestone, and its floor is one mass of ice. Stalactites

hang from the walls, and the whole looks like an ice palace as it sparkles like rubies, sapphires, and diamonds under the glare of the electric lights. It makes us think of the splendid palace that Aladdin built in a night. On the floor is a natural skating rink covering about one third of an acre. We are given skates and we fly around, cutting circles and figures on the glassy surface.

Locate and bound Czechoslovakia. To what countries did it belong before the World War? With which of the United States does it compare in size?

Describe Prague, and its advantages for trade. How far is it from Berlin? What large city does one pass through on the route?

Trace a bale of human hair from Shanghai to Prague via the Suez Canal and Hamburg, going all of the way by ship or boat. Trace a hair net from Prague, via London, to New York.

What important minerals has Czechoslovakia? What semi-precious stone comes from Bohemia? Is this stone found in the United States?

What are some of the principal industries of Bohemia? Find out all you can about glass and how it is made. (See Carpenter's "How the World is Housed.")

What races inhabit Czechoslovakia? Describe the Czechs. In what part of the republic do they live?

Where are the homes of most of the Slovaks? What great cave is found in that region?



XXXVIII. POLAND

WE have left Czechoslovakia, going northward through the mountains into Poland, the land of Kosciuszko, which by the World War has again become a republic. We should all know about Kosciuszko. There is a statue of him in Lafayette Park near the White House in Washington.

It was erected as a monument for what he did for us during the Revolutionary War.

Kosciuszko had been a captain in the Polish army, and it was in 1776 that he came to America with a letter from Benjamin Franklin. General Washington made him a colonel, and he took part in some of the most important campaigns. He planned the fortifications at West Point, and fought bravely in many battles. When peace was declared he had the rank of a brigadier general, and Congress thanked him for his services.

After the war Kosciuszko returned to Europe and commanded the army of the Poles in their war with the Russians. He started a revolution and tried to establish a republic like ours, but the Russians were the stronger and he was defeated.

Hope for a season bade the world farewell,
And Freedom shrieked when Kosciuszko fell.

Until about that time Poland had been one of the largest and most civilized countries of Europe. The Poles were Slavs and Roman Catholics. They had long been noted for their love of freedom, and one hundred years before we declared our independence of England, they had formed what was really a republic, with a king elected for life. That government declared that no one should go to prison except under due process of law, and the law said every man should have the right to worship as he chose.

Later on, Prussia, Austria, and Russia combined to destroy Poland. They conquered the country and each took a part of it. They took more from time to time, until finally all the Poles became their subjects. There were frequent rebellions, however, and when Germany and Austria were defeated in the World War which ended in 1919, the Poles

were given back much of the land they once owned, and now have a republican government again. They elect their own rulers, and every man and woman over twenty-one years of age has the right to vote.

Poland to-day is one of the large countries of Europe. It is about as big as California, and its population is about one fourth as great as that of the whole United States. The word "Pole" means plain, and most of



Poland consists of a fertile plain, through which the Vistula River is the chief waterway. Most of the country lies in the basin of the Vistula, which rises in the Carpathian Mountains and flows northward, emptying into the Baltic at Danzig (dän'tsĭk). On its upper waters are Cracow (krā'kō) and Warsaw, two of the principal cities of the republic. The Vistula is connected by canal with the Dnieper (nē'pēr), which flows into the Black Sea near Odessa, so that goods can be sent that way from the Baltic to the Mediterranean.

Where we enter Poland, the country is mountainous. In fact, the country as a whole is low and flat, except for the foothills of the Carpathians and the glacial hills in the north. We are still in the foothills of the Carpathians, and the land is one of oil fields and mines of coal, iron, zinc, lead, and salt. We go first to Lemberg, the chief industrial center of this region, visiting the factories and spending some time in the museum and the town hall. Lemberg makes farm machinery and hardware, and every January it has the "Fair of the Three Kings," to which merchants from far and wide come to buy and sell. Among the articles for sale are cattle, sheep, horses, tobacco, potatoes, and such grain as rye, oats, wheat, barley, hemp, and buckwheat.

During our stay we visit the market, where the country women have brought the vegetables, chickens, ducks, and other things they raise for sale. They are dressed in bright colors. They wear over their shoulders gay shawls, under which show blue, pink, or red waists. Their heads are covered with kerchiefs. Many are barefooted, and some wear rough boots and straw shoes. Here is a girl peddling live guinea fowls, and there is another with geese. The birds lie on the street with their legs tied together. Hard by is a

woman peddling blueberries. Her lips are black; she has probably been eating her wares. Farther over are merchants selling bowls, spoons, and forks, made of wood.

One of the most interesting places in Poland is not far from Cracow on the railway from Lemberg. This is Wieliczka (vyě-lyěch'kà), where are some of the largest and most remarkable salt

mines of the world. The beds of rock salt are far down under the earth, and they have been mined for more than nine hundred years. The salt is found under a region twenty miles wide and as long as from New York to Pittsburgh. At one place where they are working there is a mine with forty-eight miles of galleries at different levels, which is not unlike an underground town, almost one thousand feet below the sur-



Entrance to one of the tunnels in the salt mine at Wieliczka

face. Its tunnels cut out of the salt, if joined together, would reach as far as from Philadelphia to New York.

We leave the train at the station and put on caps and long cloaks to protect our clothing before we enter the shaft.

We can see the white salt when we are about sixty feet down, and from there we drop past tunnel after tunnel, until we get off and enter some of the great chambers in the salt rock. One of the rooms has been set aside as a church, and it is much larger than many a church in the United States. Its walls, floor, and ceiling are of the purest rock salt. It has a pulpit carved out of salt, chandeliers cut from salt, and many statues made of the same white rock. Going on, we pass through a great hall which has been used for dancing for more than a hundred years. It has a ceiling of salt, walls of salt, a floor of salt, and a chandelier of salt crystals, which sparkle like diamonds under the light. During our stay in the mines we pass through a grotto where the lights are reflected in an underground lake, and where, on a pedestal rising out of the water, is a statue of salt. Our guide places a torch behind the statue, and the rays come through the crystals, making us think of silver and diamonds and emeralds. Some of the salt is of a green color; other parts of the rocks are light gray, and in many places the crystals are as white as the driven snow. There are more than a thousand men at work in these mines, and there are horses that spend a great part of their lives working here.

We have enormous deposits of rock salt in our own country. The author has visited some in Louisiana near the Gulf of Mexico, where chambers as large as a schoolroom have been cut out of the beds of rock salt purer than that here at Wieliczka. We have so much salt in Texas that if it could be divided equally there would be enough to give a four-horse wagon-load to every man, woman, and child in the world and leave plenty to spare. Near Salzburg in Austria there are great beds of salt that have been worked since the days of the Romans.

Poland is rich in mines. She has coal, iron, zinc, and lead, and her manufactures are of many kinds.

Taking a train at Wieliczka we are soon in Cracow, the ancient capital of Poland, and for a long time the residence of the Polish kings. It is situated in a rich farming country on the left bank of the Vistula River, about two hundred miles northeast of Vienna. It once belonged to the Hanseatic League, of which we learned something during our stay at Lübeck in Germany, and it is still of commercial importance. We visit the Stanislaus Cathedral, where the Polish kings were crowned, and then drive outside the city to see Kosciuszko Hill, on the top of which is a mound as high as a six-story house. This mound was erected by the people, who dug the earth from the battle-fields where Kosciuszko fought, and carried it here to show their love for their famous patriot.



XXXIX. INDUSTRIAL POLAND

WE might go northward through the great plain of Poland to the Baltic Sea by the Vistula River. The stream is more than six hundred miles long. It is a great trade route, and small boats go as far south as Cracow. Warsaw, the largest city of the country, is situated on the Vistula, and from there to Danzig there is great traffic in lumber, grain, farm products, and goods made at Warsaw and elsewhere. There is a canal that connects the Vistula with the Oder, and quantities of goods are taken that way from Poland to Germany.

We prefer, however, to make our trip to Warsaw by rail, for we want to stop at Lodz, the Manchester of this part of

Europe. Lodz has now about seven hundred factories in which spinning and weaving is done, and it makes cottons and woollens, as well as goods of linen and silk.

About fifty years ago Lodz was a small city, but it now has as many people as Milwaukee. In addition to cloth, it makes machinery and boilers, as well as chemicals and beer.



American cotton at a factory at Lodz

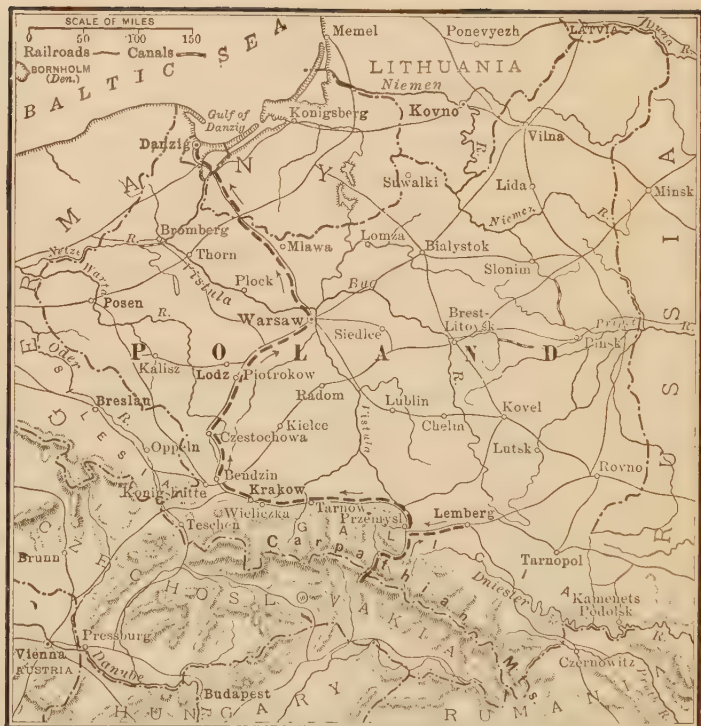
The chief street of the town is seven miles long, and is lined by factories and mills from one end to the other. Much of the raw cotton used comes from the United States, but some is from beyond the Caspian Sea in Turkestan. Most of the goods made from it are sold in Poland and Russia, and some are exported across Russia to Mongolia and China in Asia.

It is more than eighty miles from Lodz to Warsaw, and we go there by rail. Our way is over the plain, through fields of rye, wheat, barley, and oats. Most of the farms have cattle and sheep. The buildings are rude. There are carts and wagons drawn by horses at all the stations. The people increase in number as we near Warsaw, and we ride out of the country over the Vistula River into one of the finest cities of Europe.

Warsaw is the capital of Poland and also its chief social and industrial center. The city is situated on a plateau at the edge of the valley through which the Vistula runs. At this place the river is about half a mile wide, and is crossed by many fine bridges, one of which, the Alexander bridge, cost more than a million dollars. Standing upon it, we have a fine view of the town. We can see the royal palace and the many fine churches of the old and of the new city. We look over beautiful gardens and parks and see the smokestacks of the many great factories. Warsaw has altogether more than ten thousand industrial establishments, and manufactures a half billion dollars' worth of goods every year. It makes machinery, cars, and carriages, and also boots, shoes, cottons, and linens.

The city is an old one. It was a commercial and manufacturing place seven hundred years ago, and is now the capital of the new republic of Poland.

Warsaw owes its growth to its situation in a rich plain on a navigable river, below a point where several large tributaries come together. It is also a railway center, being on the trunk lines that cross Europe from Paris and Berlin to Moscow. We spend some time visiting the factories, public buildings, and the university, which has a library of more than half a million volumes.



Our route through Poland

From Warsaw we go northward to Danzig on the Baltic, near the mouth of the Vistula River. Danzig formerly belonged to Germany, but is now a free city under the protection of the League of Nations.

Danzig is built on two arms of the Vistula, about five miles from the Baltic. The country around is low and marshy. Many of the buildings are of six or seven stories, with quaint roofs and old-fashioned doorways. Among them are ware-

houses with boats anchored before them. There are also rafts piled high with wheat from the rich farms on the plain, or with lumber from the forests of Poland. These cargoes are transferred here at Danzig to vessels which take them to other ports by way of the Baltic. After that the rafts are broken up and sold, and their owners go back home by rail or on foot. Cotton and other goods from the United States can be landed at Danzig and shipped by water to Warsaw by way of the Vistula; and they could be sent on even to Odessa on the Black Sea via the Vistula, the Bug (boog), the canal, and the Dnieper, which empties into that sea. There are steamship lines which go direct from New York to Danzig.

Which country was first a republic, Poland or the United States? Tell what you can about Kosciuszko.

To what family do the Poles belong? In what European country is most of this family found?

What is the size of Poland? Compare it with Norway and Italy; with California.

Mention some important minerals of Poland. Describe your visit to the salt mines. With what United States mines may they be compared? Write a story about salt. (See Carpenter's "How the World is Fed," and Carpenter's "North America.")

What are the chief cities of Poland? Describe them and tell for what each is noted.

How far is it from Warsaw to Paris? To London? To Berlin? To Moscow? Take a trip from Seattle to Warsaw by water; by land across the United States to New York and thence via London. About how far would you travel in the latter journey?

Where does most of the cotton cloth made at Lodz and Warsaw go? From what part of Asia does some of Poland's raw cotton come? Why can it be brought more cheaply from the United States? Trace a shipload from New Orleans to Warsaw.

XL. AUSTRIA

WE have left Danzig and come by fast train across Poland and Czechoslovakia, and are now at Passau (päs'ou) on the Danube, near where the great river flows from Bavaria into the republic of Austria. We shall take ship here and steam down through the mountains to the city of Vienna. Next to the Volga, the Danube is the largest river of Europe. It is twice as long as the Rhine, and the basin it drains is five times as large.

Until America was discovered, the Danube was one of the two chief trade routes from Asia to Europe. Then it was not thought possible to go to China by sea. The way around the Cape of Good Hope had not been discovered, and many hundreds of years were yet to pass before the Suez Canal would be built. All the spices, tea, and dried fruits, fine silks, furs, and beautiful goods from China, Japan, India, and other parts of Asia were carried overland on camels or horses, to the Mediterranean ports. Here they were shipped either to Venice to be taken across the Alps to the Rhine, or to Constantinople and over the Black Sea to the mouth of the Danube and up that stream, to be transferred to the Rhine. In the same way, woolen cloth and other things from Holland, Belgium, France, Germany, and England were sent up the Rhine and thence down the Danube to Constantinople.

To-day the Danube is more traveled than ever, although it has lost much of its commerce with Asia. It flows through rich countries teeming with people. Many cities and towns have grown up on its banks, and vast quantities of lumber, food stuffs, and manufactured goods are carried back and forth over its waters. The river is the chief highway through central Europe. More than sixty navigable

streams flow into it; it is connected by the Ludwig Canal with the Main and the Rhine, and its traffic grows greater and greater.

But we shall see all this better as we move down the river. The stream is not wide at Passau, and it winds its way through the mountains until it passes Vienna (vē-ěn'á) and leaves Austria, spreading out as it flows through the great plain of Hungary below Budapest (böö-dá-pěst). Going on, the Danube is comparatively smooth until it reaches the rapids at the Iron Gate, where the rock has been cut away so that boats can pass through. From there on it is a wide stream to its delta on the Black Sea.

The scenery of the Danube from Linz (lĩnts) to Vienna is quite as fine as that of the Rhine. The mountains are higher, the rocks steeper, and there are almost as many castles and old robber fortresses. Shortly after leaving Linz we see the remains of the one in which Richard the Lion-Hearted, King of England, was imprisoned for sixteen months while his bad brother, King John, ruled. Richard had gone to the Holy Land on a Crusade to redeem the tomb of Christ from the Turks and was on his way back to England. One day he heard a familiar air played under his prison window. He knew that it came from his servant, Blondel, outside, and through him he was able to make his escape.

Going on, we float by green meadows where fat cattle are grazing. We pass quaint villages of one-story, sharp-roofed houses built close to the streets, where the goats and geese are picking at the grass between the stones. Now we go through a region where the hills are terraced with vineyards, like those on the Rhine, and by mountains covered with pine. Now we are close to the banks, and now so far from them that we seem to be in a lake rather than in a river.

As we go onward we see girls doing their washing on the banks of the stream. They kneel down at the edge of the water and laying the clothes on the stone, pound the dirt out with long wooden paddles. A little farther down the river a woman is bathing two boys, who stand up to their waists in the water while she scrubs them with soap. One of the boys is crying, and we wonder if the soap is in his eyes.

See those lumber rafts floating downstream. The waves of our boat roll them about, and the children on the roofs of the raft houses cry out with fear as we fly by. The logs are tied together, and each raft has a hut where the lumberman lives as he floats down the river. We pass also covered barges which make us think of Noah's Ark; they belong to traders who ply from one Danube town to another. The traders live on the boats with their families, and the children play about on the floor and the roofs within a few inches of drowning. We wonder that their parents do not tie little barrels to their backs to keep them from sinking, as the Chinese do with their children on their houseboats in South China.

Traffic thickens as we steam onward. We pass market boats and grain and wool barges. We move in and out among tugs and steamers of all sizes, until in the distance we see the tall spire of St. Stephen's Cathedral and other high buildings of Vienna, the capital of Austria.

Before landing in Vienna, we should know about the great empire of which it was so long the ruling city and center of commerce and trade. Until the World War, which ended when peace was declared in 1919, Austria-Hungary comprised the two countries of Austria and Hungary as they are to-day, and also a part of Italy, all of Czechoslovakia, and a large portion of what is now known as

Yugoslavia (yū-gō slāv'ŷa). It had over two hundred and sixty thousand square miles, and was the largest country in Europe except Russia. It owned the seaport of Trieste, which now belongs to Italy, and the rich mines of Czechoslovakia, and for years it had ranked among the richest and greatest powers of the world. To day Austria and Hungary are each independent countries, and have lost a large part of the valuable territory which they held in the past. Austria is not much more than one fourth its former size, and Hungary has been greatly reduced. Austria is now only about as large as Ireland or our state of Maine. It is twice as big as Switzerland or Denmark. Its population is only six or seven millions, or about one fourth what it was before the World War. It has lost its best territories to the new republics, and though formerly a rich nation, it has now become a very poor one.

The country of to day is largely mountainous. In the west is the Tyrol (tŷ'öl), a portion of the Alps as rugged as Switzerland, and the mountains continue until they drop off into the great plain of Hungary, which raises so much grain that it has been called the bread basket of Europe. The government of Austria is now a republic, and the people may in time become prosperous again.



XII. VIENNA

WE are starting out this morning on a motor-car ride through Vienna. Our hotel is on Ring Street, and we first take a drive around this wide avenue that encircles the heart of the city. It is two miles in length and has a double row of linden trees in the center. The build-

ings on it are so magnificent that it has been called the *finest* street of the world.

We pass the houses of parliament, the university, the great museums and picture galleries, and go by so many fine stores that we seem to be motoring through a World's Fair. The buildings are not sky-scrapers such as we have in New York. They are nearly all five or six stories high, having stores on the ground floor and apartments above, as is common in Berlin and Paris. The people here live in apartments, and very few families own a whole house.

As we ride onward we see strange faces and costumes. Here comes a dark-bearded Turk with a red cap on his head, and behind him is a light-haired Jew from Bohemia with two blond curls hanging down in front of his ears. On the other side of the street is a Bulgarian peddling canes, and near him a gypsy from Rumania and two Greeks in skirts. This city is at one of the chief crossroads of Europe, and people from all of the many nations about are to be seen on the streets. One human stream flows from the Orient up the valley of the Danube, and others from northern and western Europe flow down. A third stream comes from Italy across the low passes of the Austrian Alps on its way to and from Russia; another comes from Germany by way of the Elbe and Oder across Czechoslovakia; and others come in from the many states of south Russia.

It is the situation of Vienna at the junction of these many streams of traffic that has made it such a great city. It was a good place for commerce and trade in the Middle Ages, and of late years its river communications have been so improved, and its railroads so extended in every direction, that it is now connected by steam with all parts of Europe. It is three hundred and seventy miles from the seaport Trieste. It has fast express trains to

Berlin and Rome, and the Orient Express passes through it, on its way from Paris to Constantinople. Moreover, when Vienna was the capital of Austria-Hungary, the Emperor lived here, and his court was one of the gayest in Europe. This also did much for the growth of the large city. By the World War it lost much of its importance as a government center, and also the resources upon which it



Our route through Austria

greatly depended for its manufacture, commerce, and trade.

Leaving Ring Street, we tell our chauffeurs to drive us out to the Prater (prä'tēr), the chief pleasure ground of Vienna. It is a large forest park, embraced in the arms of the Danube, and reached by bridges filled by people on foot, on horseback, and in cars and carriages going over and back. It has about four thousand acres of oaks, chestnuts, and elms, the branches of which meet over its roadways and shut out the sun. There are many lakes and canals and velvety lawns, and in the Wurstel Prater there are large playgrounds for the children. There are moving

picture shows, Punch and Judy shows, and all sorts of amusements. We get out of our automobiles and take rides on the lions, elephants, and camels of the "merry-go-rounds." We fly up and down the roller coasters and the giant wheels. We slide down the chutes, and try our strength at hitting the swollen cheek of a comic figure known as the watchman. We see other children riding on donkeys and in goat and dog carriages, but we have no time to try them, although the fare is only about five cents of our money for a ride.

Coming back to the city, we visit the picture galleries and the great museum. We stop at a café to try some rolls and coffee, for which Vienna is famous, and then take a stroll through the Graben on our way back to the hotel.

The Graben is one of the oldest streets of Vienna in its chief shopping section. Its stores have plate glass windows in which are shown all sorts of beautiful things made of leather, ivory, silver, and gold. There are opals from Hungary, fine glass from Bohemia, china from Austria, and as many knickknacks and notions made in the city as we saw in the great stores of Paris. Vienna is famous for inventing new things to sell. It weaves silks, cottons, and woollens; and has factories of almost every description. The people manufacture novelties in their homes, and the women and children have a large share in the work. Many Austrian women work in the factories, and one sometimes sees a woman pushing a wheelbarrow or even carrying mortar and bricks to the masons as they work on the buildings.

During our stay in Vienna we climb the steps inside the spire of St. Stephen's Cathedral. This church is in the heart of the Ring. It is four hundred and fifty feet high,



Part of Vienna and the Danube Canal, from an airplane

and we have a fine view of the city. It looks like a spider web as it is spread out below us. There are other streets beyond Ring Street, and the cross streets cut them, coming almost to the cathedral.

We can look over the wooded hills outside the city and see the wide Danube, dotted with shipping, flowing amongst them. The forests, we are told, once extended to the square in which the church stands, and inside one of the buildings upon it there is a stump protected by iron bands which once marked the limit of those great woods of the past. It is called the Iron Stick, and its surface is studded with nails driven in by the locksmiths of Vienna. According to our guide, each smith had the right to put in a nail upon leaving the city, which act, it was thought, would make him lucky thereafter.

Locate Austria. About what is its size and population? How large was it before the World War? What new republics have been made from Austria?

Compare the Danube with the Rhine; with the Volga; with the Elbe. Trace a carload of goods from New Orleans to Rotterdam and Vienna by way of the Rhine, Ludwig's Canal, and the Danube. Trace a cargo from New York to Vienna by way of Gibraltar, Constantinople, and the Danube.

What were the two chief trade routes from Asia to Europe before the Cape of Good Hope was discovered? Before the Suez Canal was built?

Describe your trip down the Danube to Vienna.

Why has Vienna become a great city?

How far is it from Vienna to Paris? To Constantinople? To Liverpool? To Berlin? To Rome? To Trieste? Suppose you were ordered to start to-day from your home to Vienna, how would you travel? How far? How long would the trip take?

What seaport had Austria before the World War? Has it one now?

What part of Austria lies in the Alps?

XLII. HUNGARY AND THE MAGYARS

WE are again on the Danube this morning. We have left Vienna and are moving down the great river on a comfortable steamer. The two lower decks are crowded with peasants dressed in strange costumes, but our state-rooms are on the top deck and there is plenty of room. We take our camp stools out under the awnings which have been stretched over the deck, and make notes of the scenery as we steam on our way.

Leaving Vienna, the river widens, branching out into great arms and embracing islands covered with woods. We see gardens, orchards, and vineyards in which men, women, and children are working, and go by quaint villages, where the boys and girls stand on the banks and wave their hands at us as we go by. It takes but a few hours for us to pass out of Austria into Hungary.

Hungary consists of the greater part of a great plain almost surrounded by the Carpathian Mountains. The Danube runs through the plain, and another river, the Tisza (tē'ső), flows across it from the north and joins the Danube.

On our way we pass one end of the Carpathian Mountains. They are covered with forests, but vineyards and orchards of peaches, apples, and pears are also to be seen. Here and there men are cutting timber and now and then we pass logs in the river upon which sit black-throated penguins which stand up and flap their short wings as we pass. We are soon out of the hills and near the great plain.

Just before entering the plain we stop at Pressburg (prēs'bōork), now in Czechoslovakia, a little city with a ruined castle on the hill high above it. For generations it was the capital of Hungary; the kings of that country

were crowned in one of its churches, and the parliament sat in that castle.

For a long time Hungary was associated with Austria as a part of the Austro-Hungarian Empire, the two countries working and fighting together under one ruler, although each had a constitution and government of its own. In the World War, Austria-Hungary united with Germany to fight the French and their allies, and we all know how badly they were defeated. After that the two countries were separated by the treaty of peace, and parts of Austria and Hungary were taken from them and formed into the new republics of Czechoslovakia and Yugoslavia, lands which we have yet to visit.

We have seen how Austria was reduced to about one fourth its size and population by the World War. Hungary lost nearly three fourths of its territory and more than three fourths of its people. It is, however, larger and more populous than Austria. The Hungary of to-day is about the size of Indiana and it has a population of about eight millions. Hungary is still a kingdom, but at present it is governed by a regent.

As we steam rapidly southward, there are many towns and villages on the plain, and the population thickens as we approach Budapest. The city lies on both banks of the Danube, and six bridges have been built across it to connect the two sections. One of these is a suspension bridge, which makes us think of our bridges at Niagara Falls and across the Ohio at Cincinnati. We ask why a city has grown up at this point, and are told that Budapest lies at the northern end of the plain, and that its situation on the Danube makes it the best shipping place for this agricultural region. We see large flour mills on the banks of the river and hundreds of vessels and barges beside them, loading and unloading

flour and grain. Budapest grinds the wheat of the plain, and the wheat is so good that bakers will pay the highest price for its flour.

Budapest reminds us of Minneapolis. Our flour city lies on both sides of the Mississippi just as Budapest lies on both sides of the Danube. The section on the right bank is known as Buda; it is famous for its mineral springs and was a health resort in the time of the Romans. Pest, just opposite, is the newer city, and is the center of the milling industry, which, in some respects, is even more advanced than our own. It was here that steel rollers were first used instead of stones to make flour, the process being invented by a Budapest mechanic. The new method was soon afterwards adopted at Minneapolis, and is now employed in all the great mills of the world.

The wheat of the Hungarian plain comes into Budapest by railroad and by the Danube. Much of it is loaded on barges and towed up the river by steamers. There are few elevators in the country, and much of the grain is loaded and unloaded by hand. We pass some of the barges as we enter the city, and go by the fine quays of stone, back of which are the beautiful buildings and parks for which Budapest is noted. Our ship lands at Pest, and it is only a step from the wharf to the hotel. We give our baggage to the porters and stroll along the wide streets. They are paved with asphalt and lighted by electricity. There are many automobiles and electric cars, flying back and forth over the roadway. Budapest was the first of the European capitals to introduce electric railroads, and it has now electric cars both on the surface and in tunnels below.

Our hotel is on Franz Josef Square in the heart of the city. Our long steamboat ride has made us hungry, and we enjoy our dinner, which is served in Hungarian fashion.

Everything is well cooked and the food is delicious. A band plays as we eat, and the small fee we give at the close of the meal makes the waiter address us with respect, and insures us good service thereafter.

We spend some days in Budapest. It is a gay city, with moving picture shows, concert halls, and public gardens where the people sit under the trees and eat and drink



An airplane view of Budapest, showing the Parliament Houses and the Danube

while they listen to the music. We go one afternoon to Margaret Island and eat our supper under the trees, while the Gypsy band plays. The scenes here make us think of the Prater in Vienna. The island is the chief pleasure ground of Budapest, and has many concerts and merry-go-rounds.

Returning to the city, we take a drive through Andrássy (őn' drăsh-ı) Road, a wide boulevard over two miles in length. It is lined with mansions surrounded by gardens. We visit the parliament houses and see the Hungarian con-

gress make laws for the people. We go to the universities and schools, finding that the Hungarians have a good system of education. The schools of the city are conducted in the Magyar language, but other languages are used in some other parts of the country. The land is one of many peoples, and has communities in which there are Magyars, Slovaks, Rumanians, Serbians, Gypsies, and Jews.

The Magyars, the leading race of Hungary, own the richest parts of the country. They belong to the yellow race, being somewhat like the people of Finland. The Magyars came from Asia centuries ago and made their way up the Danube, settling upon the great plain. They are a brave people, patriotic and strong, proud and hospitable. They are fond of titles, and on ceremonial occasions a child addresses its father as "Mr. Father," and its mother as "Mrs. Mother." The oldest brother is then called "Mr. Elder Brother," and the oldest sister, "Miss Elder Sister," while the younger children may be "Miss Younger Sister," and "Mr. Younger Brother."

Most of the signs of Budapest are in the Magyar language and we try to pick up a few sentences to help us along in our talk with the people. However, the words are nothing like ours, and we make many mistakes. We ask for butter, using the word "butor," and they bring us a chair, for "butor" means furniture. We find that "hat" is not to be worn on the head; it means the number six; while "kar-pit" is wall paper, not a floor covering. The word "eleven" means alive, and "fog" is a tooth.

The dress of the people of Hungary varies with the locality. That of the well-to-do Magyars in Budapest is much the same as our own; but they have also a court costume that consists of a satin jacket embroidered with gold, tight-

fitting breeches, and high boots with spurs, to which are added a belt of gold and a fur cap, sometimes ornamented with precious stones. We see many strangely clad peasants in the markets of Budapest, and shall meet others at almost every port as we go on down the Danube. It is queer to see women wearing high-topped boots, but that is the custom in some parts of Hungary. In many places the women have on boots of green, red, and other bright-colored leather which reach almost to their knees. They wear short skirts, and often one will have many skirts, one over the other. They wear tight-fitting waists of different colors, and aprons which are beautifully embroidered.

The dress of the peasant men is quite as odd as that of the women. One costume consists of a jacket with silver or nickel buttons, a bright red waistcoat with full sleeves of white linen, and wide-fringed drawers which are tucked into high-topped boots. In the winter, both sexes of the peasants wear long sheepskin coats with the wool inside, and in summer sometimes have on similar coats with the wool showing.

We pass many grain barges as we leave Budapest and go on the Danube south through the rich plain. We float by the mouth of the Drave (drä'vê) River on our right, and later by that of the Tisza on our left. Both streams are filled with boats carrying wheat and rafts of lumber on their way to the Danube. There is a canal from the Tisza to the Danube.

The country reminds us of the Mississippi valley. Now the land is rolling like the prairies of Illinois and Iowa, now it is as flat as Nebraska and Kansas. Now we are passing through a region where there is nothing but wheat, wheat, wheat. The grain is spread out like a golden ocean which rises and falls in billows as the wind sweeps across it. Now



Hungarian farm scene. Drawing water

we go by great farms in which fields of corn, rye, oats, and barley are mixed with the wheat. There are no fences separating the crops, and no barns or farmhouses standing alone on the landscape. The people live in villages and walk out to work on their farms.

We are interested in the barges which are being towed up the river. They have double rudders and high carved red and blue prows. Some are roofed over so that they look like floating boxes, and each has a family or so living upon it. The children sit on the roofs and stare at us as we steam by.

There, on the right, are some barges at anchor. I mean those two not far from the shore with the great wheel between them. See, the wheel is rapidly turning, moved around by the swift-flowing current. That is a floating flour mill. There are many anchored here and there throughout this wheat belt. The large barge contains the grinding machinery which is moved by the paddle wheel. The dusty, white-faced miller stands at the stern. The small barge is merely a support for the other end of the wheel.

Now look beyond the mill to the bank! See the ox carts coming up loaded with wheat! There on the edge of the water, men are throwing the bags into a boat. They will soon row them out to the mill, and when the grain has been ground, take back the flour. By and by the mill may be floated down the river to some other wheat region and there go on with its grinding.

Going on, we stop at a town where the farmers are threshing. They have laid grain on a flat, hard, earthen floor and are pounding the wheat from the chaff with flails. In other places they are driving cattle about so that the beasts tread out the grain, and on some of the larger estates are

reapers and threshers such as are common in our wheat lands of the Northwest. The people often bring their crops to one place for threshing, and the threshers also move about from farm to farm as they do with us.

Bound Hungary. What European countries are of about the same size? What American state?

What great river runs through Hungary? How do the crops compare in kind with those of the Mississippi valley?

What United States city is of about the same size as Budapest? What city has much the same industries? Why?

Trace a carload of flour from Budapest to Paris; a boatload to Rotterdam. Ship a cargo of farm tractors and threshing machines to Budapest via Gibraltar. At what ports might they be landed? How could they be sent all of the way by water?

Who are the Magyars? To what race do they belong? What other people of this race have we already visited?

What is the government of Hungary? What was it before the World War?



XLIII. THE LOWER DANUBE — YUGOSLAVIA

FARTHER down the Danube, we come to Serbia, and then make our way on between Bulgaria and Rumania to the Black Sea. Here the farming is ruder than in Hungary. The farms are not so large, and much of the grain is cut with scythes, a score or more of men moving along in a row through the fields, while as many women follow, binding the sheaves.

Almost all the way down to the sea we pass herds of horses, pigs, cattle, and sheep. The shepherds wear sheepskin clothing and high boots. The men who mind the cattle are proud of their horses, and upon holiday seasons

decorate them with ribbons and bells. These cowboys of the Danube are high-spirited fellows, and at such times they wear the gayest of clothing. They have silk sashes about their waists, and overcoats embroidered with flowers. The horses of the Danube are famous and command high prices in Europe.

The scenes in the towns are as queer as those of the country. The usual farm village consists of one long street in which there are benches under the trees, where the people sit in the evening. The women knit as they chat, and they knit even when they rest at their work in the fields. Many of the houses are white with blue doors; and have roofs of red tiles or straw thatch. Each house has a fence about it, and at the back are stables with ricks of grain near them. On some of the roofs storks have built their nests, and now and then we see storks feeding in the mud along the banks of the river. They remind us of our travels in Holland.

We stop at Belgrade (běl-grād'), the old capital of Serbia, on our way down the Danube. It is situated where the Save (sáv) River runs in, and is a great trading post. A part of the city stands on a hill one hundred and fifty feet high, from which there is a fine view of the river. Belgrade has handsome public buildings and also several old mosques which were used by the Turks when they controlled this part of Europe. The parks and streets are lighted by electricity and we are able to get automobiles to ride out into the country.

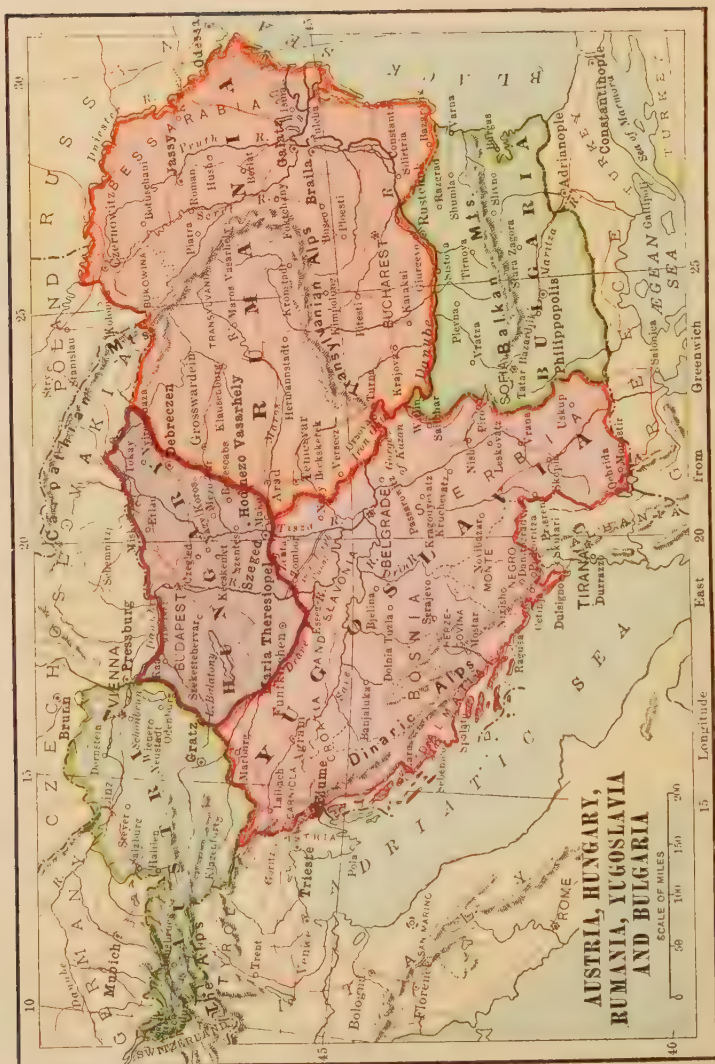
Belgrade is the capital of the kingdom of Yugoslavia, which was formed at the close of the World War by taking Croatia, Slavonia, Bosnia, Herzegovina (hě'rsě-gō-vě'nă), Carniola (kăr-nyô'lă), and parts of Hungary, and uniting them with Serbia and Montenegro. The new kingdom is



Peasant woman near Belgrade, Yugoslavia

about twice as large as the state of New York and in area almost equal to Colorado. It has nearly twice as many people as New England, and is a land of many farms, rich mineral deposits, and millions of acres of forests.

The country extends from the Danube to the Adriatic Sea, and is bounded on the south by Albania and Greece. Much of the land is mountainous, but there are rich valleys and plains, and although the lands were devastated by the World War, the people will some day be very prosperous. In Serbia nearly every peasant has his own farm.



The chief crops of Yugoslavia are wheat, corn, oats, rye, and barley. There is no place in Europe where plums grow better, and a great deal of plum marmalade is made for export. About thirty thousand people are employed in silk culture; some raise tobacco, and a large number are engaged in stock rearing. The country has millions of sheep, cattle, and hogs, more than two million goats, and hundreds of thousands of horses. There are fifty large flour mills in the kingdom, and among others of the chief industries are weaving, tanning, and the making of pottery and iron. Serbian rugs have always been noted. The best of them come from Pirot. They are made of pure wool, and are dyed after a secret process which has been transmitted for generations from father to son.

The Yugoslavs belong chiefly to the Southern Slav race. They are of the same family as that we found in Czechoslovakia, and shall find also in some parts of Russia.

The chief seaports for Yugoslavia are the Italian cities of Trieste and of Fiume, both on the Adriatic. Many of our exports are shipped to these ports, via Gibraltar, and thence inland by rail. The country has also an outlet to the Ægean Sea by means of a railway to Salonica, a seaport of Greece. It has connection also with the Black Sea by rail and the Danube.



XLIV. THE LOWER DANUBE — BULGARIA

WE are on the edge of the mountains at Belgrade, and float in and out through the hills as we steam on down the Danube. There are many rapids, and now and then we pass through a canyon. At the gorge of Kazan the cliffs rise above us for hundreds of feet. They look as

though the rocks had been torn apart to let the great river through. At Orsova (ôr'shō-vō) we pass through the channel made in the Iron Gate to the smoother waters below. The Iron Gate is a ledge of gigantic tooth-shaped rocks about a mile wide which almost fills the river. When the stream is low the rocks rise high above the surface, and the water seethes and foams as it dashes over them. Hundreds of steamers have been wrecked here, and for ages it has been a great obstruction to commerce. Within recent years a channel has been blasted out with dynamite, and many millions of dollars have been spent in making a waterway through which ships can easily pass.

Shortly after leaving the Iron Gate, we begin our voyage through a vast plain which forms a part of Bulgaria and Roumania, comprising also the wide delta through which the Danube flows into the Black Sea.

The Danube forms a large part of the boundary between Bulgaria and Roumania. We have passengers from both countries on board, and are able to learn much about them and their people. The Bulgarians are comparatively new among the independent peoples of Europe. Their ancestors were yellow people who came from Asia many centuries ago and settled the land where they are now. But they were conquered by the Turks, and for many generations were more or less under the government of the Sultan. It was only a few years ago that they succeeded in obtaining their complete independence, when they established the kingdom of Bulgaria, with a national assembly of lawmakers elected by the people.

Under their new government the Bulgarians have progressed rapidly. They have many schools and are establishing model farms to teach the people farming, silk-raising, and fruit-growing. Their religion is the Greek Catholic,

a form of Christianity which we shall find everywhere throughout Russia, and also in Rumania, Greece, and other states of the Balkans.

Bulgaria is important on account of its position, where railroads must pass through it in taking the shortest route from Asia to the western parts of Europe, and also because of the Danube. The trunk line that connects Europe with Asia goes from Paris to Vienna and Budapest, and thence through Belgrade, and crosses Bulgaria to Constantinople. Sofia (sô'fê-yà), the capital of Bulgaria, is reached by this road shortly after it passes the boundary between Bulgaria and Yugoslavia. It is about three hundred miles from Constantinople, at a place where the chief highways of the region come together. The city lies in a high plain at the foot of Mount Vitosh, whose crest is crowned with perpetual snow.

Sofia is old, but it has been rebuilt within recent years, and has many fine public buildings. During the World War it was bombarded by the airships of the Allies, but little damage was done. It is the commercial and industrial center of the kingdom and has factories of cotton, wool, silk, and tobacco.

The Bulgaria of to-day is about as big as Ohio, and has nearly as many people. The country is mountainous, but has fertile valleys and plains, on which are grown large crops of corn, wheat, rye, and tobacco. It has millions of sheep and cattle, and hundreds of thousands of goats, horses, and mules. It raises fine fruits, and there are many mulberry trees whose leaves feed the silk worms.

Bulgaria is a land of small farms, and nearly all the farmers own the soil they till. They live in villages and go out to their work in the fields. Almost every village owns some pasture land and woodland which belongs to the people in

common, and every one in the town has the right to pasture his stock and get his fuel from these lands without charge.

We visit several villages on our way down the Danube. The houses are small and the people spend much of their time out of doors. Women sew and knit in the streets, and spin and wind their wool there. We even see them kneading bread on the streets. They get down on their knees and roll out the dough on long tables, making it into great round flat cakes, which they sometimes spread out on cloths on the streets to dry.

In one village we meet a flock of geese on its way to the market. There are so many that they fill the whole street, crying and hissing at us as they move along. The goose-herd asks us to stand close to the houses to let them go by.

We are interested in the Bulgarians. They wear strange costumes, much like those we saw in the farming districts of lower Hungary and Yugoslavia. The summer clothes are of heavy cotton embroidered in bright colors, and the girls often have bits of looking-glass and beads sewed to their gowns to make them look gay.

The country is famous for its beautiful scenery and for its fine fruit and flowers. It is one of the few places where flower-raising is a chief industry. We have already visited Holland, where tulips and other choice bulbs and plants are raised for export to the United States, and Grasse in southern France, where perfumery of all kinds is made for shipment to Paris and elsewhere.

Bulgaria has the most famous rose gardens of the world, and here is made attar of roses, an oil or perfume so strong that it makes one almost giddy to smell it, and so valuable that a tablespoonful of it is worth ten dollars or more. This oil is made from roses, and put up in leaden bottles which are shipped to the great perfumery factories in Paris,

London, New York, and elsewhere, where it forms the basis of hundreds of different scents.

The best rose district is on the southern slope of the Balkan Mountains, in what is known as the Valley of Roses. This is a strip of land about eighty miles long and thirty miles wide. It is protected by the hills from the cold north winds of the winter, and has just the right soil and moisture for these beautiful flowers. More than twenty thousand



acres are cultivated for this purpose, and enough roses are raised to equal ten to every man, woman, and child in our country and leave millions to spare. There are almost two hundred villages devoted to rose culture.

The rose bushes are of two varieties, one a red rose, known as "Rosa Damascena," and another pure white, the "Rosa Alba." The two are combined in making the attar. The roses are set out like grapevines in a garden of soft earth and manure. They are kept free from weeds and care-

fully cultivated. They will grow about a foot the first year and will be yielding large crops when they are five years of age. At that time the bushes are as tall as a man. They continue to bloom for twenty years.



XLV. THE LOWER DANUBE — RUMANIA

LEAVING our Danube steamer at Rustchuk (rōōs'-chōōk), Bulgaria, we have come by rail over the bridge into Rumania and traveled across the rich plains to its capital city of Bucharest (bōōk-a-rest'). The town is situated on both sides of the Dimbovitsa (dīm-bō-vē'tsā) River, which is crossed by twelve bridges, seven of stone and the others of steel.

Bucharest is called the "Paris of the Balkans." It has fine residences, good stores, and excellent hotels. The buildings of the business section remind us of the cities of Germany, although the shop windows are more like those of Paris. There are many cafés, and the people sit out on the streets late at night in front of them, eating and drinking under the electric lights as they gossip and chat. The streets are wide and well-paved. There are electric street cars and many automobiles.

In the older parts of the town the houses are more like those of Turkey, for they were built when Rumania was under the rule of the Sultan. Even now we sometimes meet a Mohammedan clad in a fez cap or turban and wearing a gown. We also see Russians, Bulgarians, Greeks, and Jews. There are peasants in strange costumes who have come in to shop from the country about. Many of the people look not unlike the Italians, and we learn that they

are the descendants of the Roman colonists who settled here centuries ago. The Rumanian language is of Latin origin, and therefore has many words which were used by the Romans.

But first let us get a general view of the country and people. After the World War, to the old kingdom of Rumania, which had joined the Allies in fighting Austria-Hungary and Germany, was added Bessarabia, taken from Russia, Bukowina (bōō-ko-vē'nä), Transylvania, part of the Bánát (bä'nät), and other territories formerly in Austria-Hungary, making the new kingdom of Rumania as it is to-day. The new Rumania is a constitutional monarchy, with a parliament or Constituent Assembly elected by the people. All citizens of twenty-one years and over, who pay taxes, have the right to vote, and the parliament makes the laws and decides how the taxes are to be collected and the money spent.

The new Rumania is more than twice the size of the old Rumania. It is as large again as our state of Louisiana, which it resembles in that it is formed partly by the delta of the Danube, as Louisiana is formed by the delta of the Mississippi. The country includes the southern part of the Carpathian Mountains, sloping from them in great plains to the Danube and the Black Sea. It owns the mouth of the Danube, which is the chief water trade route through south central Europe, and the outlet of the wheat plains of Hungary.

In the mountains of Rumania there are millions of acres of forests, and in the same region are found rich deposits of coal, salt, and petroleum. Much of the coal oil and gasoline which the Germans used in the World War came from this part of Europe. They had conquered the Rumanians, and they worked the oil fields.

The plains of Rumania remind us of the Mississippi valley. They are covered with a deep loam that produces large crops of wheat and corn, and also oats, barley, and rye. Rumanian wheat and corn compete with ours in the markets of Europe. There are large vineyards and many orchards loaded with fruit. Most of the people are farmers who live in villages and go out to their work. There are no barns, and the wheat is put up in stacks near the villages.

Leaving Bucharest, we travel about over the plain. The farming methods are backward, and we see many openings for the sale of our farm machinery. Some of the peasants are plowing with crooked sticks shod with iron, and now and then one may be seen driving a team of oxen harnessed to a tree top which he has cut off and is dragging across the plowed ground. We wonder what he would think of a gasoline tractor pulling a chain of steel harrows. It is only on the larger farms that modern machinery is used, although threshers are now taken from village to village. In the olden times the grain was trodden out with horses and cattle.

A large part of our time is taken up in making snapshots of scenes in the fields and the villages, for Rumania is full of strange things. See that rosy-cheeked child who is going to market with her father and mother. She wears a linen gown of red and white stripes and a black jacket out of which come the long sleeves of her gown, ruffled at the wrist. She has a string of beads around her neck and a bright-colored handkerchief over her head. Her mother is dressed in the same way, and her father has a long skirt over his trousers coming down to the knees. On his head is a high woolen cap.

Here come two boys wearing coats of sheepskin with the



Rumanian girl wearing her "market basket" hat containing food supplies

wool inward, wrinkled tight trousers, high caps of black lambs' wool, and shoes of straw tied on with strings. Behind them is a boy with shoes of soft leather; they are more like mittens than shoes. In winter the peasant women and men wear long coats of sheepskin with the wool inward. At that season, when the icy winds sweep over the flat snow-covered plains, the boys pull their long caps down over their ears, for it is often bitter cold.

The dress of the people is different in different villages, and on market days the gayest costumes are to be seen. The women's gowns reach from their necks to their ankles, and are embroidered in red or black cotton, and they wear bright scarfs covered with spangles on their heads. They have long necklaces and large earrings. Many of them remind us of Gypsies, for Rumania is one of the chief Gypsy lands of the world. Gypsy bands play in the markets, and we can have our fortunes told by a Gypsy girl almost anywhere by crossing her palm with a small piece of silver.

The Rumanians are superstitious, and signs mean a great deal to many of them. They tell us it is not well to set a hen in the new moon, and one's hair should not be cut when the moon wanes, or it will surely fall out. The sowing of seeds is regulated by the changes of the moon, and also by the sparrows, as the way these birds fly indicates whether the weather will be good or bad.

Leaving the plain, we travel over the highlands, seeing large droves of cattle and many sheep, horses, and mules. There are orchards of fine fruits in the hills, and the drying of prunes and raisins is a thriving industry.

Making our way to the northern part of the country, we visit the petroleum fields near the Carpathian Mountains, and in the same region find rock salt, which is refined and shipped all over southern Europe.

From the Carpathians we travel by rail across the country to Braila (bră-ē'lă) and Galatz (gă'lätz), near where the delta of the Danube begins. We steam for miles through the delta. It is very extensive, embracing a low country as large as Connecticut. The scenes remind us of the delta of the Mississippi. The land is rich and covered with crops. Braila and Galatz are the chief grain ports at the mouth of the river, and at Braila, where we take ship, there are scores of vessels loaded with wheat and flour starting out through the delta to the Black Sea. They will cross that sea to the Strait of Bosphorus and sail on by Constantinople through the Dardanelles (där-dă-nělz') into the broad Mediterranean. They will leave the Mediterranean through the Strait of Gibraltar, and thence go northward to the ports of western Europe.

Name the chief countries of the lower Danube.

What is the chief city of Yugoslavia? Of Bulgaria? Of Rumania? Visit each and tell what you see.

Name the chief seaports by which we may reach Yugoslavia.

Where is the Iron Gate? Describe it.

With what part of the United States does the lower Danube valley compare? Where does most of our wheat grow? Describe a threshing scene in the wheat lands of the United States; in the wheat lands of the Danube.

Through what great peninsula have we been traveling on our way down the Danube? By what waters is it inclosed?

What trunk line of railway runs through the peninsula? How far is it from Constantinople to Paris?

To what family do most of the people of the lower Danube belong? What family is found in Rumania? Why is it like the Italian?

For what flower is Bulgaria noted? Tell all you can about a perfume made from that flower.

What is the chief export of the lower Danube? Trace a cargo of grain from Braila to Liverpool. Through what important straits does it go? Through what seas?

XLVI. THE UKRAINE — ODESSA

WE are in the Russian port of Odessa this morning. Leaving the mouth of the Danube River, we steamed all night through one of those dense fogs that often hang over the gloomy Black Sea, and the fog horn kept blowing until we came to anchor in the harbor under the high, ragged bluff on which Odessa is built. Near where we landed were many huge grain elevators, where formerly steamers started out with their cargoes of wheat on the long voyage across the Black Sea and through the Mediterranean to London.

Close by our ship was a steamer unloading reapers, threshers, tractors, and other agricultural implements from the United States, and in other parts of the harbor were barges which had come down the Dnieper River, and steam and sailing vessels from all parts of the Black Sea. We saw one oil tanker filled with petroleum just in from Batum, six hundred miles away at the foot of the Caucasus Mountains, and we made our way through a crowd of passengers who had landed from another ship just in from Constantinople.

Crossing the busy stone quay, we climbed the two hundred granite steps of the wide stairway that leads to Nicholas Boulevard on the bluff, and where we found quarters in a hotel which was quite as large as those in Budapest and Vienna.

Since then we have taken motor-cars and ridden about through the well-shaded streets of the city. We have visited the chief business and manufacturing centers, and have even explored the catacombs underneath them, from which came the soft shell limestone used in the principal buildings. We have also called upon the public officials, and altogether

have learned much about Odessa, the southwestern gateway of the Russian plain.

We are now in the southern part of Russia, known as the Ukraine, or Ukrainia, which has an area of more than three times that of the state of New York, and a population one fourth as great as that of the whole United States. The Ukraine is one of the six constituent republics comprising Russia, or the Union of Socialist Soviet Republics, which includes both Russia in Europe and Russia in Asia. The Ukraine is a land of grain fields and pastures, with large deposits of coal, iron, and manganese. It is noted for its production of sugar, which is made from sugar beets to the amount of millions of tons every year.

Odessa is the chief port for this region. The city lies near the southern end of a vast plain of black earth which has some of the most fertile wheat lands of the world. There are beds of coal and iron not far away, and the Black Sea gives it access to the mineral deposits of the Caucasus Mountains. The city is connected by rail with all parts of Russia, and with western Europe through Poland and Rumania. It also has the many navigable waterways which flow into the Black Sea from the north. It is, in fact, about the only water outlet for the great Russian plain, and the only port which is open for shipping all the year round.

Odessa is different, however, from any town we have seen. The people are a mixture of all the races along the Black Sea. There are some motor cars and motor trucks on the streets but most of the vehicles are drawn by horses which trot along in harness with great yokes rising high above their necks. Here comes a droshky, a carriage peculiar to the Russians. We shall find many like it in every Russian city we visit. Its wheels are no larger than those

of a bicycle, and its bed is only a foot from the ground. A big black horse is harnessed to the shafts, which end at the front in a yoke rising a foot and a half above its neck. There are no tugs, and the shafts are fastened to the collar just under the yoke.

What an odd looking driver! He weighs about three hundred pounds, and his long navy blue gown, tied in at the waist with a red sash, makes him look bigger. He is proud of his size, and our guide tells us that his coat is padded to make him look fatter, and that some droshky drivers even put little pillows inside their coats to increase their girth. This man wears a bell-shaped black hat, and his long beard hangs down on his breast. He holds his arms straight out in front of him as he drives, slapping the horse with the reins to make him go faster. If you ask him to stop, he will call out "Burr-r" to the horse, instead of "Whoa."

Now turn your eyes to the people as they go along the streets. What a variety of costumes and colors! The crowd is a mixture of a dozen different races, for men of all the countries about come here to trade. There are Turks and Armenians with fez caps and dark clothes, Greek sailors wearing gay jackets, white shirts, and red shoes turned up at the toes. There are fierce-looking Circassians with high caps of Astrakhan fur, and merchants from Persia in turbans and gowns. There are Mohammedans from eastern Russia, Cossacks from the land between here and the Caspian Sea, light-skinned Georgians and broad-faced, yellow Tatars from the banks of the Volga. There are many Ukrainians and some from the provinces to the northward on the borders of Poland. We can tell the Russians by their big frames and fine faces. They are Slavs. The men are tall and broad-shouldered, and the women are

strong, handsome, and stately. Most of the men have thick beards, and many of them wear long overcoats, and top boots that come to their knees. The women from the country have on rough shoes of straw or felt, bright cotton gowns, and handkerchiefs bound around their heads. Even the schoolboys have visored caps and overcoats just like their fathers', and some of the schoolgirls wear caps of bright silk.

Here comes a newsboy crying his papers. We buy one, but cannot read a word. The Russian alphabet is different from ours and its letters look a little like Greek. The signs over the stores mean nothing to us, and we have to look at the goods in the windows to tell what is sold. We cannot understand the languages we hear as we go along the sidewalks, and have trouble in telling our droshky drivers which way to go. When we enter a restaurant we ask for an interpreter to explain the names of the dishes on the bill of fare, and we shall need a guide who speaks English during our travels. Indeed, eastern Europe has so many races and peoples that we shall need new guides for many localities, for we might speak a score or more languages and still find places where most of the people speak something else.



XLVII. RUSSIA — GENERAL VIEW

RUSSIA is so large and its people are so many that we should know something about the country as a whole before we go farther. The nation is now undergoing so many changes that what we see to-day may not be true of to-morrow, next month, or next year. During

the World War, the Russian Empire, which had endured for many centuries and which for a time united with the Allies in fighting the Germans, was overthrown by the Russian people. A new government was set up by men who wished to make Russia a democratic republic. But this was overthrown by a second revolution, when power was seized by extreme radicals, called Bolsheviks. Great changes in society and in almost every branch of industry took place, until most of the railways and nearly all the factories and industries fell into partial disuse. For a time even the stores disappeared, and trading went back to barter as in the Middle Ages. A great deal of business in Russia has been done by national and local coöperative societies of one kind or another, and at one time there were sixty thousand such societies in Russia. These societies, like the factories, were mismanaged at first by the Bolsheviks. The whole social and political structure of Russia became disorganized, but after a decade of power, the new government succeeded in bringing some order out of the chaos and further progress seems probable.

Shortly after the second revolution, late in 1917, the All-Russian Congress of the Councils of Workmen's, Soldiers', and Peasants' Deputies met and formed a government which was controlled by the executive committee of this organization. This government is commonly known as the Bolshevik government, and now rules the greater part of the former Russian Empire. One of its first acts was to abolish private ownership of land, and to declare all real estate to be state property. Another was to confiscate all shipping, and all private banks, and to nationalize all foreign trade. The Bolsheviks left Petrograd (pyë-trö-grät'), which they have renamed Leningrad, and moved their capital to Moscow.

In connection with these acts, the Bolsheviks have formed what is known as the Union of Socialist Soviet Republics. This Union comprises six constituent republics. (1) Russian Socialist Federal Soviet Republic, comprising the greater part of Russia in Europe and Asia; (2) White Russia and (3) Ukraine in Europe; and (4) Transcaucasia, (5) Turkoman Republic, and (6) Uzbek Republic in Asia. The word Soviet means council; the government is supposed to be controlled by delegates chosen by soviets or councils elected by workmen. In reality, however, the elections are controlled by the Communist party, which is only a small minority of the people, and that party and the country are under the domination of a few leaders.

According to law, all lands have become the common property of the people, and all the forests, mines, and waterways belong to the nation. The lands have been divided among the peasants and nearly every man among them holds more or less. The state owns all the railways and other means of transportation. Everybody is compelled to work, and the republic is supposed to be a socialist community of the laboring classes.

It is only when we learn the size of the Russian nation and the extent of its territory that we can realize what these changes may mean. At the beginning of the World War the Russian Empire comprised almost one sixth of the land on the globe. Its possessions in Europe and Asia from west to east were longer than from Hong Kong to San Francisco, and from north to south so wide that the United States could have been dropped down within them and still have left parts of Canada and Mexico inside the boundaries. They were twice the size of all Europe, larger than all South America, and greater than the combined areas of the United States, Canada, and India. When it was

eleven o'clock in the morning in one part of Russia, it was six in the evening in another part of the same empire. At that time the country contained fully one tenth of the whole human race; this means that of all the world one man in every ten was a Russian, and one acre out of every six belonged to a Russian. The nation of to-day is even larger and the territories they now inhabit comprise the greater part of Europe and about one third of Asia.

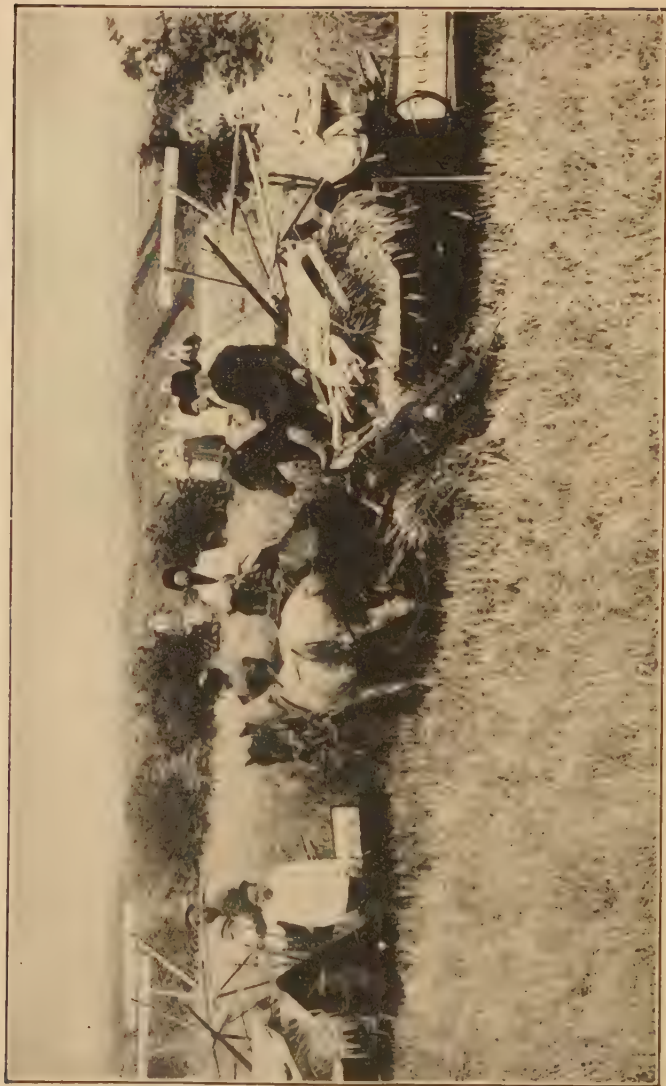
After the Bolshevist revolution, separate governments were formed in Ukrainia, Siberia, Georgia, and many other parts of the former empire; but these lands were reconquered by the Bolshevists. Finland and Poland made good their independence, and also the smaller Baltic states of Estonia, Latvia, and Lithuania.

The land still left to Russia in Europe, however, is so large that we might move on steadily many months and not visit it all. It has about half of the land of the continent. It is more than half the size of the main body of the United States. It is farther from Murmansk, the open port of the Arctic Ocean, to the Caucasus Mountains, than from Hudson Bay to the Gulf of Mexico; and the distance from Poland to the Ural Mountains is about equal to that between New York and the Mississippi River. From Odessa to Leningrad is as far as from New Orleans to St. Paul, and in going northward to Moscow we shall have to travel about as far as from New York to Chicago.

Indeed, the distances are so great and the country so large that the only way we can possibly get a general idea of Russia is by taking an airplane and flying across the country from one end to the other. Let us suppose our flight to begin at the Arctic Ocean, and that we are moving across the land from the north to the south. Our machine rises from the ice on a coast bordered with vast morasses

and cold swamps called tundras. Everything is bleak and dreary. The trees are stunted, and the ground is covered with moss. The ground is frozen to a great depth, and thaws only on the surface in summer. There are whales in the sea, and polar bears and other wild animals on land. The only human beings to be seen are the strange Lapps and Samoyedes (să-m-ō-yědz'), semisavages who look much like our Eskimos. They have light yellow faces, high cheekbones, and eyes somewhat slanting. They are not unlike the Laplanders we saw in Norway, and have much the same customs. They live in bark tents, roaming about with their reindeer, and grazing them on the mosses and lichens that grow on the tundras.

Flying south from this region, we go for hundreds of miles over the vast forest belt that runs east and west from the Pacific Ocean almost to the Atlantic, taking in northern Asia and Europe. It is one of the widest and densest strips of forest of the whole world, and it crosses European Russia from one end to the other. The trees grow larger as we fly southward. We first pass over dense woods of pine and fir, containing excellent timber, and then go on south over a region of hardwoods, elms, sycamores, and oaks, seeing nothing but trees, trees, trees, for hundreds of miles. Here and there we may spy a bear or wolf, and now and then see a camp in which the lumbermen are cutting the timber, and floating it northward or southward down the great rivers. Outside of this we seldom see anything human. The forest zone has thousands of square miles which are entirely uninhabited, where there are no railroads, and where all nature is as wild as it was in North America when it was occupied only by the Indians. The forests originally covered more than one third of the land, extending as far south as Moscow, but have been partly cleared.



A wheat field in the Caucasus. The machinery comes from America

Leaving the forests, we find ourselves over the prairies, and drop to the earth for a rest. We are now in a well-populated region that normally produces a great deal of oats, rye, and barley. There are flax fields everywhere. Russia grows more flax than any other country. It has the chief flax belt of the world, just as we have the chief cotton belt. In the flax regions there are many villages, and now and then we see a railroad.

Flying on to the south, we enter the famous black earth zone. This is a wide belt of fertile soil which stretches from the Carpathian Mountains across to the Urals. The land is covered with a sheet of black soil which is from three to twenty feet deep and so rich that it has yielded crops of wheat for many generations without fertilization. It reminds us of the black waxy belt of Texas or the rich lands of Illinois and Iowa. It is the best part of Russia, and the chief source of its wealth. Here the country is well populated. It has cities and towns and countless farm villages.

Going still farther south and more to the east, we fly over a treeless plain covered with grass. This is known as the steppe. It furnishes pastures upon which sheep, cattle, and horses are feeding. It ends near the Caspian Sea and the Caucasus Mountains.

In this flight we have been looking down upon level land. Most of Russia is a vast plain. With the exception of the Valdai Hills near Moscow, from the Arctic Ocean to the Black and the Caspian seas the land is nearly flat, and from the Baltic Sea to the borders of Asia there is almost no rise. The Ural Mountains, except at the north, are so low that the railroads which cross them are made without tunnels, and, in fact, the plains extend far on into Siberia, making the largest expanse of almost level land of the world.



During our journey we have seen many rivers. Russia is well watered except at the southeast near the Caspian Sea. It has scores of navigable streams joined by canals. There is direct water connection between the Arctic Ocean and the Caspian Sea, between the Caspian Sea and the Baltic, and between the Black Sea and the Baltic. Five of the rivers are more than a thousand miles long, and the country has so many miles of navigable rivers and canals that if they could be joined they would reach twice around the world. The Volga is the longest river of Europe. The Oka (õ-ká'), one of its tributaries, is longer than the Oder; and the Kama, another, is more than four hundred miles longer than the Rhine. The Volga flows into the Caspian Sea, but the Don, Dnieper, and Dniester (nēs'tēr) are all navigable rivers which flow into the Black Sea, and the Pechora (pā-chô'râ), Dvina (dvě-ná'), and Onega (õ-nē'ga) rivers have their mouths in the Arctic Ocean. The Neva is the outlet of Lake Ladoga (lâ'dô-gâ), carrying its waters into the Baltic. It flows through Lenin-grad and might be called the Thames of Russia. It is joined by a canal with the Volga, forming a continuous waterway from the Baltic to the Caspian Sea. There are other rivers and canals which connect the Baltic with the Black Sea; indeed the whole of Russia has a net of waterways which form the chief highways, swarming with boats in the summer and sledges in winter.

A great plain like this gives free sweep to the wind, the cold blasts from the Arctic Ocean blowing southward to the Black and Caspian seas, and covering the ground for months with a thick bed of snow. The land is one of hot summers and very cold winters. It lies far north on the globe so that the winters are long and the winter days short. There is so much cold that the farmers cannot

work for more than half of the year. On the other hand the summers are warm and the abundant sunlight of that season makes the crops grow.

Let us now take a bird's-eye view of the people of Russia. Parts of this vast territory are thickly populated and the Russians all together number one twelfth of the whole human race. There are almost as many people in European Russia as there are in the continent of North America; and they differ from one another quite as much as the races which inhabit our continent. They have different customs, and the languages are not the same. There are more Slavs than people of any other family; but Russia has also millions who belong to the yellow race, including hundreds of thousands of Tatars who are of the same race as that from which the Turks come. In the Ural Mountains and along the coast of the Arctic Ocean we find millions of Samoyedes, who are somewhat like our Eskimos.

The Slavs of European Russia are roughly divided into the White Russians, who live in the marsh and lake lands sloping towards the Baltic; the Great Russians, who inhabit the forest area and other regions; and the Little Russians, or Ukrainians, who have settled in the black plain of the Ukraine. In addition are the Cossacks, a brave people, famous as cavalry soldiers. They live in the lower valley of the Don and in the Urals.

The Great Russians, the most numerous of these peoples, are perhaps three fifths as many as the people of the whole United States. Many are found in the forest zone, but they are scattered also over central Russia and a part of the black plain, and far and wide along the Volga. They are a strong people, tall and broad shouldered, having fair complexions, light hair, and blue eyes.

They have thousands of towns and hundreds of thousands of villages. Their towns cover a great deal of ground. Each has a square in the center. Many of the houses are built of stone and painted white, yellow, or pink. Each town has its church with its blue or gold spire and often a dome of the shape of an onion. But we shall see how the people live as we travel over the country.

Leaving Odessa, our train takes us rapidly northward.



The methods of farming are still crude in southern Russia

We pass through a region of vineyards, cross plains on which great herds of cattle and sheep watched by Russian cowboys are feeding, and come into the bread lands of the black plain, which, in normal times, can produce so much wheat and corn that they compete with our farms in the markets of Europe. To-day the methods of farming are rude. The plows are of wood shod with iron, and the soil is scratched, rather than cut into deep furrows.

We enjoy our ride on the train, which is different from any we have in America. Look out as we go around that curve and see the dense black smoke pouring out of the engine. That comes from the oil used as fuel, because the petroleum from near the Caspian Sea is cheaper than coal in this barren region. Farther north, in the forest zone, the smoke will become a light blue, for our locomotive will make steam with wood. We shall have racks filled with wood just back of the engine; it will keep two firemen busy throwing it into the furnaces, and we shall see wood piles at every few stations.

Our cars are by no means uncomfortable. We are riding first class on an express train. We have seats near the windows, and among our fellow passengers are officials, some of whom speak English and tell us much of their country and people.

Every now and then we pass a slower train, largely composed of second and third class cars. The second class cars are more cheaply furnished than those of the first class; they are ordinarily patronized by the more important and richer travelers. The third class cars are not much better than cattle cars with seats like rude benches. Nevertheless they are crowded.

Notice that train waiting there on the side track! It is filled with long-bearded, shock-haired men in rough cotton clothes, and with women in short cotton gowns of bright colors, with shawls and handkerchiefs tied around their heads. The men wear caps, and have boots of felt or leather. The shoes of many of the women are of straw, and in place of stockings they have rags tied around their legs. Each man has a bundle beside him or under his feet; that is his baggage. In the third class most of the baggage is taken into the cars. At some of the stations

we see the people using their bundles as pillows, sleeping on the stones while they wait for the train.

Take a look at the station where our train is stopping. It has a stone platform, and the building is large and well kept. That bell against the wall is for starting the train. The station has a restaurant where fairly good food is to be had at moderate prices. Travel is not so comfortable now as before the World War. The Russians seem always to be eating; and, in normal times, tea, cake, and fruit are brought to the car windows at every station.

The tea is served in glass tumblers, with two or three lumps of sugar and a slice of lemon, but without milk. We try to drink it in the approved Russian fashion. We squeeze the lemon into the tea, and then, putting the hard sugar lump between our teeth, slowly suck the tea through it. It tastes good, but the custom ruins the teeth, and we notice that many Russians on this account have teeth which are decayed. The Russians drink a great deal of tea, and every family has its samovar filled with hot water. The samovar is a brass urn with a pipe running through its center, in which burning charcoal keeps the water hot, so that, by turning a spigot, fresh tea can be made at any time of the day. There are samovars at all the stations, and the tea peddlers behind them are long-haired, long-bearded men, with faces that remind us of old Santa Claus.

In our long ride from Odessa, we have seldom seen a house standing alone on the landscape. There were no fences marking off the farms as in America, and no barns or haystacks off by themselves. Except the cowboys and the shepherdesses watching the flocks, we did not see a person alone in the fields. The people live in villages, going out to their work in the morning and coming back in the evening. At every few miles we pass little groups

of thatched huts, and we can see other groups dotting the country on both sides of the track. Each collection of huts is a Russian village, a type of the thousands which are to be found in nearly all parts of Russia.

The Russians are a nation of farmers, and over eighty per cent of the people live in farm villages. There are more than five hundred thousand such villages, and they are like no other small towns to be found in the world.

Our train is now stopping at a station within a few miles of one of these little settlements. We leave the cars with our guide and take a troika, a strange vehicle to which three horses are harnessed. The carriage looks much like a boat upon wheels. It has one horse inside the shafts. The two others, one on each side, are hitched to bars which extend from the ends of the axles of the front wheels. The team looks sorry enough, and we get in with much fear and trembling. We have hardly taken our seats before the driver cracks his whip and the horses go off at a great speed. The one in the shafts trots at a four-minute pace, and those outside go on the gallop, so that we fairly fly over the rough ground. The road runs right through the fields. We drive between green and yellow seas of rye and wheat which are moving in billows under the winds. We pass fields of yellow sunflowers, and meadows where flocks of sheep are feeding, watched by shepherds who lean on their staves and gaze at us in wonder.

At last we come to our village. It has but one long street lined with straggling huts made of stone, logs, or earth and thatched with straw. The only large building is the church. It is of boards painted white, and its roof ends in a gilded dome which can be seen far and wide over the plain. The street has no sidewalks. It is merely a wide grass plot between the rude houses, with a roadway in the middle.

There are trees here and there on each side of the roadway. Under one of them a woman is knitting. Her children are playing about her, and tied to one of the branches she has a box in which her baby is lying. She swings it now and then as she works. Farther down the street some frowsy-headed, barefooted boys and girls are running about. As we stop they stand still and stare at us, while their dogs dash toward us, barking and showing their teeth.

Take a look at the houses. Only a few have gardens about them. There are no fences to shut them off from their neighbors or from the roads. The average home is a one-story house about twenty feet square, roofed with straw thatch a foot thick. Some of the larger houses have barns or stables joined to them by an ell at the rear, so that both animals and people live under one roof.

Let us visit one of these little homes. They are all made the same way, each having two rooms and a loft. We first enter an anteroom which is used as a storeroom. Harness is hanging upon the walls, rude farming tools lie on the floor, and great bags of oats are piled up in a corner. The chickens run squawking between our legs as we enter, and that calf at the back looks as though it were ready to follow.

Passing on, we reach the other room of the house. Indeed, it might be called the only room, for the first is little more than a vestibule. This serves as kitchen, dining room, bedroom, and parlor. At one side of it there is a huge brick stove, or oven and chimney combined. It is so built up from the floor that there is a ledge about as wide and as long as a single bed just over the oven and under the ceiling. The chimney goes through the roof at the head of this bed. The cooking is done in the oven,



In a Russian village on the edge of the forest

and the ledge above it is one of the beds of the family. There, in the winter, as many as can do so crawl in and sleep on the hot bricks while the others lie on the floor. There are no bedsteads and little or no bedclothes, and the whole family huddles up like so many sheep. Men and women, boys and girls, babies and grandparents, are all bunched together. They sleep in the same clothes they wear in the day time, and rely largely upon their own animal heat and that of their fellows to keep themselves warm.

As we enter, our host asks us to be seated, and we look around for chairs. There are only two to be seen, but we take seats on the benches around the wall. There is a bare table at one side of the room, and the man asks us to stay and have dinner with them. We do so, and watch his wife set the table. She does this quickly, for there is no tablecloth, and she has no plates, knives, or forks. All she does is to put a wooden bowl, about as big as a tin wash-basin, filled with cabbage soup, in the center of the board, and lay some wooden spoons beside it. We are hungry after our jolting ride over the fields, and the soup gives forth a savory odor as it steams on the table. The woman motions us to draw up our benches, and we sit down with the family. We are each given a wooden spoon about as big as the largest tablespoon, and are urged to dip in. We are at a loss how to begin until our host puts in his spoon and conveys some soup to his mouth. We do likewise, dipping in turn until the basin is empty. In addition to the soup we have black bread and raw cucumbers. There is no butter, and the meal seems plain and scanty after our comfortable stay at the Odessa hotel. Still, such is the common everyday food of millions of Russians. Some of the peasants have cows and chickens, and hence milk

and eggs. Now and then they may eat a little fish or meat, but as a rule, if they have cabbage soup and bread, they think they do well. We are surprised to find how many people dwell in one hut; sometimes as many as twelve live in one room.

Most of the Russian peasants are poor and many are shiftless. They do not seem to care for the future, and live from hand to mouth; so that when a bad season comes, famine ensues and they die by the thousand.

The Russian peasant has but few wants. If he owns a suit of sheepskin for the winter and one of cotton for the summer, with perhaps an extra suit for Sundays and holidays, he is fairly well off. In the hot weather he wears a red calico shirt outside his white or blue cotton trousers. The trousers are fastened by a string around the waist, and are often bound in just below the knees with rags, which, wrapped round and round the legs and feet, serve also for stockings.

The richer farmers used to have better houses and clothing. They wore leather boots and long overcoats of cloth or skin. The very poor have felt boots for winter and slippers of woven grass or bark for summer. The women's dress consists of a bright-colored handkerchief, which is tied round the head so that one corner falls over the neck at the back, a loose gown of white, red, or blue cotton, cut low at the neck, which reaches almost to the ankles, and an apron gathered in at the waist and extending down to the knees. A pair of rag stockings and straw or bark shoes complete the costume. The dress of both women and men varies considerably in different parts of the country.

The Russian peasants are religious. We shall find churches in every village, and every hut we enter has a candle burning under an icon (*ī'kōn*), or painting of

Christ, the Virgin Mary, or one of the saints. The Russian peasant always says a prayer when he starts out to work. He crosses himself whenever he passes a church, and mutters a prayer when he stops work to go home. He would not think of living in a house without one of the holy pictures on its walls, and often makes pilgrimages to shrines and churches which are considered especially sacred.

Many of the people are uneducated, and there are millions who cannot read or write. Of late, many public schools have been established in different parts of the country.

There are many things about the Russian villages which are different from those of the country towns of the United States. Until within recent years, nearly every village, or *mir* (*mēr*), as it is called, had a large block of land in common, which from time to time was divided among the people, and there were pastures held in common, where all of the live stock was grazed. Much of the land was worked by all the people together under overseers appointed by them, and certain of the taxes were paid by the village as a whole, and not by the individual.

As time went on, the lands came more and more into the hands of the people, and during the revolution there was a division of land, by which nearly every one of the poor peasants got a farm of his own. In this way, the old communal system has passed away. Most of the people now work their own land, planting such crops as they please and paying their taxes directly to the government.



XLVIII. LITHUANIA, LATVIA, AND ESTONIA

WE shall now take a rapid run through the Baltic republics of Lithuania, Latvia, and Estonia. These three countries formerly belonged to the Russian Empire,

but as a result of the World War they have become independent.

The surface of the three republics is much the same. They are rich lowlands sloping down to the Baltic, cut up by rivers, with here and there a great swamp or marsh. Parts of them are fairly well wooded, and each republic has a large area of cultivated land with many meadows and fine pastures. The chief crops are flax, rye, wheat, barley, and oats. Each state has hundreds of thousands of sheep, cattle, and hogs. The farmers have many fowls, especially chickens and geese, and many eggs are exported. There is a large dairy business, and the people are more prosperous than those of many parts of Russia.

Before we begin our travels in Lithuania, we pass through northern Poland where we visit Vilna, which was once the Lithuanian capital. It is an old town with fine churches and several large colleges, situated at the confluence of two rivers, which gives the port access to the Baltic. It is connected by rail with Kovno, the present capital of Lithuania, and with Leningrad, Moscow, and all parts of Europe.

We find the Lithuanians different from the Russians. Like the Letts, who inhabit the republic of Latvia, to the north of them, they belong neither to the Teutonic nor the Slavic branch of the white race, but form a group which in its language is distinct from all other Europeans. There are also many Jews, and not a few Germans. These Baltic people are largely Protestant Christians, and many of them are Lutherans. We shall find the same true of the Letts and the Estonians.

Going northward, we enter the land of the Letts, the republic of Latvia, where we make a short stay at Riga (rē-gä), its capital. Riga is one of the fine old cities of eastern Europe. It is situated on the river Dvina, about

ten miles from the Gulf of Riga, and three hundred and sixty miles southwest of Leningrad.

The Duna forms a good harbor, and the Gulf of Riga, which never entirely freezes over, gives Latvia an easy access through the Baltic to the ocean.

The principal exports are grain, flax, hides, skins, and lumber, and the imports are machines, cotton, and some kinds of manufactured goods.

Taking ship here, we steam out into the Baltic Sea and after a short voyage find ourselves at Reval, the chief seaport of Estonia at the mouth of the Gulf of Finland. This city was the third port of the Baltic in the days of the old Russian Empire.



Our route through the Baltic Republics

Reval is about as old as Riga. It is now the capital of Estonia, and its people are enthusiastic as to the future of their country. They point out its resources, and tell us that although they have no coal, they have extensive peat bogs for fuel, and that they expect to generate electricity from the falls and the rapids of the river Narva.

The Estonians remind us of the Finns. They are descended from the same branch of the yellow race, and most

of them speak a language whose origin is Mongolian. They are better educated than the Russians, having more schools and colleges in proportion to their population than most parts of Russia.



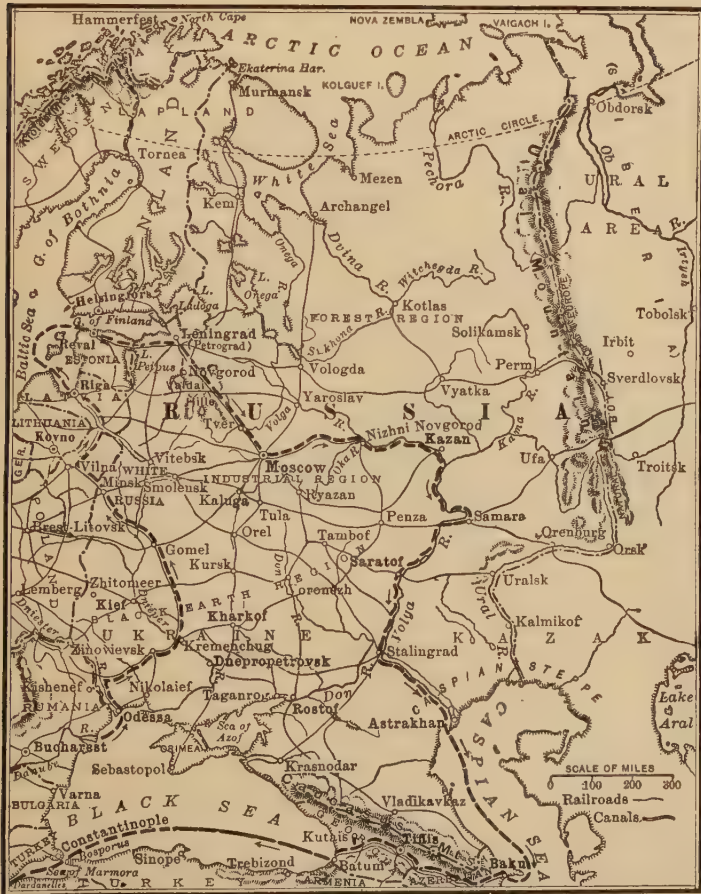
XLIX. SOME CITIES OF RUSSIA

WE have come from Reval in Estonia to Leningrad, and are ready to continue our travels through the great country of Russia. Let us take a bird's-eye view of some of the cities before we go further. We must not think that all the Russians are farmers. A nation that numbers one fifteenth of the whole human race must have many traders and manufacturers. It must have thousands of officials, and great collections of people who live together to do business of one kind or another.

Russia before the war had more than twenty-five million people living in cities and towns; thousands of towns of more than three thousand each, and more than one hundred cities ranging in size from fifty thousand to one or two millions. Moscow is about as big as Philadelphia, and before the World War, Petrograd, now Leningrad, was larger. Odessa and Kief (kē'yěf), in the Ukraine, are larger than Cincinnati, and Rostof (rōs-tōf') on the Don is about as large as Indianapolis, while Saratof (sā-rā'tōf) on the Volga is somewhat larger than Akron.

Tiflis (tyě-flyēs'), the largest city and capital of the republic of Georgia, in the Caucasus Mountains, is about as large as Denver on the edge of the Rocky Mountains, and is an ancient center of trade. Dnepropetrovsk, on

the Dnieper, has about one fourth of a million inhabitants. Each of these cities has its own special features



caused by its climate and the country and people about it, but all are much like Leningrad and Moscow, the

present capital of the country, which we shall visit later.

The ports of Russia are important. The one farthest north is Murmansk (mur-mänsk') on the Arctic Ocean. It is open all the year round and is the terminus of a railway,



One of the ice-breakers which keep open the port of Archangel

built during the World War, which connects it with Leningrad. A little farther east, on the Dvina River near where it empties into the White Sea, is Archangel, a thriving town of fifty thousand or more, which is ice-bound from October to May, although ice-breakers may keep the port open a week or so longer. The city extends along the banks of the Dvina for six miles or more, and has thirty large piers. It was founded before Leningrad, but has grown rapidly since the World War. It receives and

sends out the natural products of the colder parts of Russia, such as lumber, flax, and different kinds of grain.

Archangel is the most important port of the world situated so far north. It has a large traffic in fish, skins, furs, and timber, rafts of logs being floated down the Dvina River to be shipped from there out through the White Sea. The port is about as far from Moscow as New Orleans is from St. Louis, and is connected with all parts of interior Russia by water and rail.

We have already visited Reval and Riga on the Baltic. Although they belong to Estonia and Latvia, they serve as important gateways to Russia, and, in normal times, eggs, butter, and grain from Siberia are shipped through them to other parts of Europe. Before the war, ships from New Orleans and Galveston were frequently seen in these ports, unloading cotton bales for the factories of Russia.

The chief port of the Russia of to-day is Leningrad. It is situated on the Neva River, not far from the Baltic, and has access to that sea by the Kronstadt (krön'shtät) Canal. It has also connection with the Caspian Sea by the Ladoga canal system and the Volga River. We have already seen Odessa on the Black Sea, in the Ukraine. It is Russia's chief outlet to the south. We shall visit Batum, the oil port on the eastern coast of the Black Sea, and Astrakhan (äs-trâ-kăn') and Baku (bâ-koo'), the chief ports of the Caspian Sea, later on in our travels.

We are in Leningrad this morning standing on the dome of Saint Isaac's Cathedral in order to get a view of the city before we explore it. Leningrad is situated on the islands at the mouth of the Neva River, a wide stream which runs from Lake Ladoga into the Baltic. From our hotel we have driven in droshkies down the Nevski Prospekt,

the chief street of the city, and along the bank of the Neva to this mighty church. We have climbed the circular stairway of five hundred steps inside its dome, and now stand on its topmost point, three hundred feet above the earth in the midst of this curious city.

Below us on every side extends a vast plain of houses, cut up by the river Neva and by many canals. Far off to the west in the distance we can see the forts of Kronstadt on the Gulf of Finland, and in front of and below us are beautiful islands dotted with homes, while the city at our back stretches to the right and to the left. The land beyond is composed of swamps and morasses. There are woods and green fields to be seen here and there, and everywhere the rivers and canals sparkle like silver under the rays of the sun.

The city is laid out in acute angles, and from the dome of Saint Isaac's it looks like an immense crazy quilt of brown diamond-shaped patches, sewed together with white streets and tied with knots of white chimneys. Most of the buildings are of brick or stone, plastered with yellow stucco and roofed with galvanized iron painted dark brown.

How many chimneys there are! There are hundreds to every square, and every house is dotted with them. The city is far north on the globe. It is nearer the north pole than the southern end of Alaska, and on about the same line with Cape Farewell in Greenland. For this reason it is ice-bound and snow-bound throughout the winter, and sparks fly from these chimneys from November till May. It is so cold that the buildings have double windows and every room contains a huge porcelain stove such as we saw in Berlin.

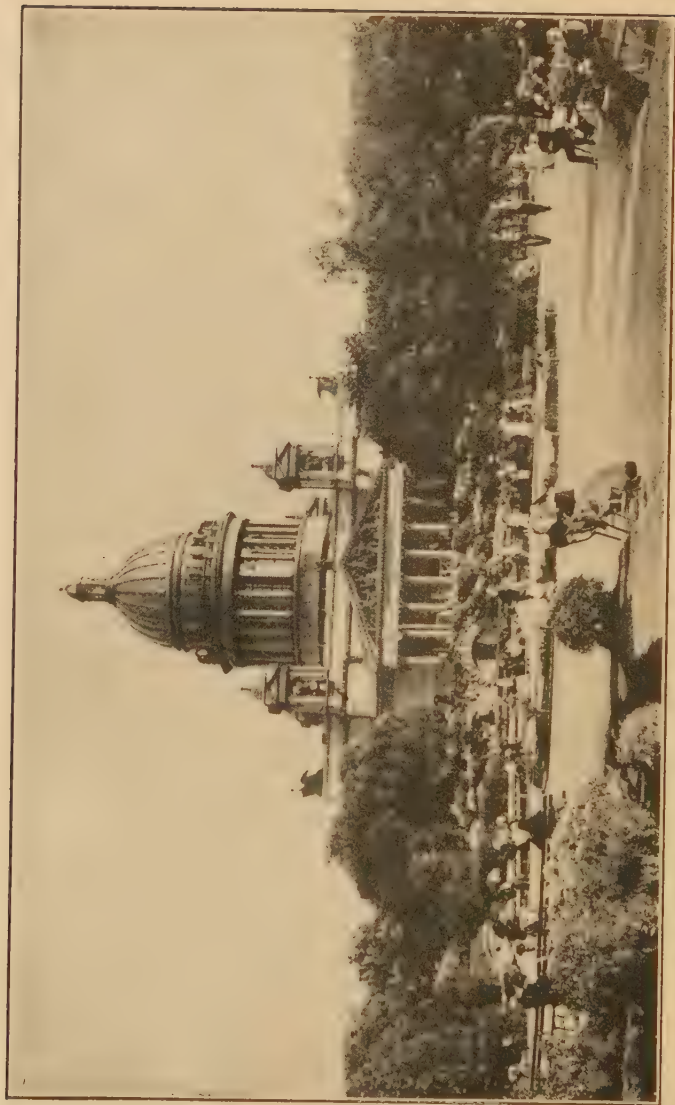
Observe how solidly the city is built, and the great space that each building covers. The banks of the Neva are

walled with stones, and the huge houses seem to be resting on rock. The crazy quilt is twenty-five miles in circumference, and many of its block-like patches are as big as a good-sized farm. The huge buildings have been constructed so that each can contain many families, although they are not sky-scrapers like ours. The rooms are larger and the buildings cover more space, being mostly of two, three, four, five, and six stories.

Here and there we can see the palaces which formerly belonged to the nobles. That red structure on the bank of the river is the Winter Palace, where the emperors of the past once held their receptions. It is now used for government offices. It has rooms that are larger than a good-sized house, and a wagon-load of hay could turn around inside one of its corridors without touching the walls.

Now let your eyes run along the former Nevski Prospekt, to-day called the Prospekt of the 25th of October. That is the widest avenue of Leningrad and the chief business street. It has many huge palaces built before the World War. It used to have stores and bazaars filled with hundreds of people. On the other side of the Neva we can see wholesale houses extending for miles along the quays, while the river and its canals make us think of our view from the tower of the palace in Amsterdam.

From the dome of St. Isaac's the people look like pygmies, and the droshkies remind us of the carriage of Cinderella before the mice were turned into horses. The street cars seem like huge bugs flying along over the rails. There are one hundred and fifty miles of electric car lines, and during the winter many miles more are laid from island to island over the thick ice of the Neva. Outside the city we see the tall smokestacks of factories, and the traffic extends on and on far into the country.



The dome of Saint Isaac's Cathedral, Leningrad, is covered with gold

But what are the immense golden mounds which rise high above the buildings in different parts of the city? Some of them have tall spires painted in the brightest of colors. They are the roofs of Russian churches, which are among the grandest of Europe. Notice this Cathedral of Saint Isaac's, upon which we are standing. Its dome is almost as big as that of the Capitol at Washington, and is plated with gold. The pure gold required to cover it had a weight equal to that of a good-sized man, and the building of the cathedral cost twenty million dollars.

Let us descend and go through the church. It has so many beautiful things in marble, precious stones, and gold carvings that our walk through it is like a visit to a museum. The marble floor covers almost two acres. The walls are of marble inlaid with gold. Only a very rich man could own a table of malachite, and brooches are often made of that valuable stone. On two sides of one of the altars of Saint Isaac's Cathedral there are eight columns of malachite, each as high as a three-story house, while about the altar is a railing of the purest white marble upheld by posts of gold.

The Kazan (kà-zân'y') Cathedral, not far away, has a balustrade of silver about its altar, and the Cathedral of Saint Peter and Saint Paul has a tall golden spire that can be seen for miles around. There are chapels in all parts of Leningrad, and wherever we go in Russia, either in city or country, we shall find churches and shrines.

The chief religion of Russia is that of the Greek Orthodox Church, although the country is so large and the people so many that there are other religions. In the cities there are hundreds of thousands of Jews. Along

the Volga and in southern Russia we shall see numerous Mohammedans, while in the east we shall meet Confucianists and Buddhists and in the Caucasus Mountains many Armenians.

From Saint Isaac's Cathedral we take droshkies and drive from one government building to another, riding through street after street of huge structures that stand as firmly as though founded on rock.

And still Leningrad is built on a swamp. The city was created at the command of Peter the Great by a people who lived far in the interior and had no reason for building it except the command of their emperor.

Peter the Great was born about a century before our Declaration of Independence was signed. He was anxious to make the most of his empire, and he visited Holland, England, and other countries in disguise to learn the secrets of their prosperity. He became convinced that seaports were needed for the trade and defense of his nation, and returned home determined that Russia should have a direct outlet to the ocean. As it was then, the Black Sea was shut off by Turkey, and Archangel, then as now, was frozen a part of the year. Therefore, he chose this place on the Gulf of Finland at the mouth of the Neva River, as the site of his capital. He was not alarmed at the swamps, nor did he fear because the land was cut up by waterways and covered with woods. He said to himself, "I will erect here a great seaport and a great city."

Peter gave his commands, and this mighty stone city sprang into being. Piles by the million were driven down to make the foundation, the river Neva was held back by walls of granite, and every vessel on the Russian rivers and every Russian ship on the Baltic Sea had to bring a load of stone to aid in the building. All the peasants near by

were ordered to help, and forty thousand men were drafted each year to aid in the work. The nobles as well as the peasants dug the foundations and erected the houses, and even the criminals from the prisons were made to toil under the guns of the guards. Every noble was ordered to establish a house in Petrograd, and every landholder who had five hundred men on his farms had to put up a two-story structure.

All the while the city was being built the emperor lived in a little log house on one of the islands of the Neva. This house still stands, and we drive down to the river to see it. It contains two rooms and a kitchen, and is not unlike one of the cabins in our forests along Lake Superior. The Russians have put another house over it, and it is kept as a monument of the city and its founder, Peter the Great. Since the present Russian government has removed the capital to Moscow, there has been a serious decline in the population and the importance of the former seat of government.



L. MOSCOW

A DAY'S ride from Leningrad has brought us to Moscow, the capital of the Russia of to-day and its chief center of industry and trade. Moscow is one of the oldest and most famous cities of Eastern Europe. The town was founded in the Middle Ages, and was the capital and principal city of Russia until Peter the Great built Petrograd and made it the capital. By the revolution during the World War Moscow was again made the capital, and is now by far the most important political center.

Moscow is situated in the Valdai (vål-dī') Hills, the only highlands in the great plain of Russia. It lies about four hundred miles south of Leningrad and eight hundred miles north of Odessa. The Moskva River, which runs through it, joins the Oka, which flows into the Volga, and the city is connected by river and canals with a great part of Russia. It is the chief railway center of the country, being on the trunk line to Siberia, and it has easy access by rail to the Don and Dnieper rivers, which flow into the Black Sea, and to the Duna, which flows into the Baltic, as well as to the Dvina, which we saw at Archangel.

Moreover, the great black plain on the edge of which Moscow is situated is densely populated, and the city lies just at the right place to be a center of commerce, manufacture, and trade. When the World War began, there were more than a thousand factories in and about it for making cottons, woolens, and silks. Moscow produces also china, glass, and all sorts of machinery, leather goods, and iron and steel products.

A large quantity of goods is required to supply the vast population of Russia, and before the World War tens of thousands of factories had sprung up in different parts of the country. We saw many in Leningrad and in Odessa, and we shall find industries, dormant or working, in every city we visit. There are iron and steel works in the coal and iron regions of the Ukraine; and at Tula, not far south of where we are now, are enormous shops for constructing locomotive and railroad equipment, and works for making knives, tools, and machinery. When the World War began, Moscow had twenty-four hundred industrial establishments, which turned out two hundred million dollars' worth of goods in one year. It had all sorts of textile mills, including three hundred devoted to cotton, and other works

which produced almost everything in wood, iron, and steel.

The chief industrial establishments of Russia, however, have always been in the homes of the people. The description which follows represents them as they were before the war. Many are disorganized now, but will probably return to their old state in the future. Nearly every Russian village has its own special industry. In some towns the people make wooden spoons, which are sold in Europe and in different parts of Asia. All together, more than one hundred million spoons are turned out in one year, and more than half of these go to China. In other towns they make toys and dolls of wood, wax, or metal. In six of the provinces there are something like thirty thousand lace makers, who produce a half billion yards of lace in one year. The common people use lace of different colors for trimming their dresses and aprons, and the shirts which the men and boys wear on Sunday often have lace stitched down the front.

In some villages of North Russia the people spin flax and make linen. In the Caucasus mountains they raise cocoons and weave silk, and in other places they tan leather and make boots and shoes. Some towns make shoes of felt and straw, and also of fibers or bark. There is one district which turns out more than a million pairs of boots every year, and another where the value of the leather made annually amounts to over one million dollars.

There are fifty villages along the Volga which manufacture cheap jewelry. They produce earrings, bracelets, lockets, and rings of copper and brass, and export them to Asia. About the Caspian Sea are thousands of women who weave fishing nets, using many tons of flax and hemp, and certain towns of the wooded regions make the wheels for



The Kremlin is a walled area containing many public buildings

Russian carts. The roads are not good, and the carts need new wheels very often. One hundred thousand people are employed in that way. In other places the bodies of the carts are made, the two being shipped to still other towns, which supply the iron and put them together.

In Orenburg the women are famous for knitting wool shawls. During a recent trip to Russia the author bought one as big as a bedquilt and so fine and soft that it could be drawn through a small finger ring.

Russia also has villages where the people make a business of raising canaries for sale, and others where they raise cats for their skins. In some villages pigeons are bred for their plumage. The skins are cured with the feathers on, and are sold at the fairs to be exported to trim women's hats and to line fine capes and cloaks.

We have all heard of Russian leather. It has a delightful odor from the birch bark used by the tanners. It is prized for pocketbooks, slippers, fine shoes, and bookbinding. Much of this leather is cured in small tanneries, and hundreds of thousands are engaged at their homes making goods from it for export and for sale to the Russians. More boots are worn in Russia than in any other part of Europe. In certain provinces the women wear high boots of soft leather, and every Russian man who can afford them has a pair of boots reaching to his knees.

But let us take a stroll over Moscow. We shall first visit the Kremlin. This is a great fortress in the center of the city that contains the old palaces of the Czar, some famous Russian churches and cathedrals in which the emperors of Russia were crowned, and the tall tower of Czar Ivan the Great. Within these great walls are now located offices of some of the high officials of the Soviet Government. There is a stairway inside, and we climb up the

four hundred and fifty steps to the top for the view. We are now hanging over a vast expanse of trees and houses, out of which rise the golden spires and domes of hundreds of churches. The roofs of the houses are painted green, while the church domes are of sky-blue spotted with stars of gold. On the opposite side of the Moskva River we can see the golden dome of the Church of Our Saviour, and beyond, reaching far out into the country, the smokestacks of the factories.

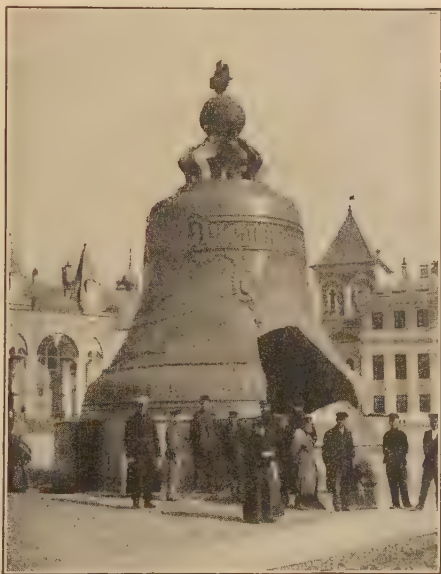
Just under our feet is the great walled space known as the Kremlin. It is paved with cobblestones, and its massive walls are entered by five gates, each of which has its history. The one through which we came is called the Gate of the Redeemer, on account of the picture of the Saviour above it, and every religious Russian takes off his hat as he goes through. All the land within the walls of the Kremlin is historic and sacred, and the people consider this place one of the great sights of their country.

As we climb down from the tower of Ivan the Great we pass the thirty-four bells for which it is noted. Russia is a land of bells. There are said to be two thousand in Moscow alone, and the largest hangs in this tower. It is so big that it could not be put into an ordinary school-room. There are others, some of small size, made of solid silver. At the foot of the tower, on a pedestal of stone, is the biggest bell ever made. It is as tall as a two-story house and almost as big around as a haystack. The metal walls are two feet in thickness. This bell was first cast in the sixteenth century and was hung in Ivan's Tower. Once the tower burned, and when the bell fell it was broken into pieces. It was cast again, but while the metal was still seething and boiling, the women of Moscow, in a religious frenzy, threw their gold and silver jewelry into the mass.

This rendered the bell so imperfect that when it was rung a great piece broke out of its side. After that there was another fire, and it fell once more, never to rise again.

Coming out of the Kremlin, we visit the great Church of Our Saviour, built in honor of the deliverance of Moscow

when Napoleon invaded the country, and then go to the Kitai Gorod, stopping in the Red Square to look at the cathedral of Vasili with its huge onion-shaped domes of gold, blue, and other bright colors. We are now in the chief commercial part of the city, and not far from the bazaars, stores, and factories. We go to the open-air markets, where new and second-hand clothing is sold. Here



The great bell of Moscow, the largest ever made

the streets are filled with tents, sheds, and tables, upon which the merchants have spread their wares. Each merchant is supposed to have a permit from the government, but there are many private traders who sell goods on the sidewalks without such permission. At the approach of a policeman, the peddlers and their trays disappear like magic. Some lay their stock on the ground

and others hang their wares on racks which they set out into the streets. The men's and boys' clothing is sold mostly by women, who go about with loads of trousers and coats on their shoulders looking for customers. There are cap peddlers, who carry their wares in four-bushel baskets.

Going on through the city, we see many stores which have paintings on the walls outside them to show the kind of goods sold within. A shoe store may have a picture of a big boot or shoe, a bakery will have loaves of bread, and the butcher may paint a ham or a rosy red steak on the wall outside his shop. The most common barber sign is a man shaving his customer, and that of the dentist shows him pulling a tooth. Such signs are necessary in a country where many of the people cannot read. They are to be found in every town and in many of the large cities.

We visit the markets before going back to our hotel. They are of enormous extent, but their stocks are low. Before the World War the Moscow markets were filled with the finest of game, meats, fish, and vegetables. In some of the pre-war restaurants there were marble fountains with fish swimming about in them. One could point out the fish he wanted for supper, and the waiter would catch it and cook it for him. Russia is noted for fine fish, and it exports quantities of fish and fish eggs. The Volga, and the Caspian and Black seas have rich fishing grounds, and there are fisheries along the Arctic Ocean and the Baltic Sea.

In some places to-day we can buy very cheaply little buckets of caviar, a Russian dainty made of the roe of the sturgeon. It looks like bird shot, but it is in reality the eggs of the sturgeon, which are eaten in great quantities by the people throughout Russia. The fresh caviar is the best; it is also canned, and sold all over the world. There are stalls where only dried fish is sold.

The queerest of the market sights are those of the winter, when almost everything is sold in a frozen state. The butcher can lay away his beef, mutton, and chickens in October, and bring them forth at any time during cold weather. The meats freeze so hard that the knife will not cut them, and they have to be sawed, or chopped up with an ax. At such times splinters of meat fly in every direction, and the beggars collect them and take them home.

Leaving the markets, we go back to our hotel. It is an enormous structure, having a dining room so large that a thousand people can be seated in it at one time.

The first thing served at a regular dinner is soup; and we find the ordinary dish of Russian soup almost a whole meal. One of the most popular kinds is known as *stchee*. Sneeze hard and you will get the right pronunciation! *Stchee* is made of cabbage and beef, to which is often added a bowl of sour cream. Each plateful of the soup has a big chunk of meat in the middle, and we are expected first to eat the soup and then eat the meat. There are other soups of all kinds, hot and cold. There is even iced soup, as we discover when we lunch one day at a restaurant. We cannot read Russian, and point to the odd letters where the word soup should be on the bill of fare. The waiter brings a great bowl of white liquid with a piece of ice as big as his fist floating about in it. We try it. It tastes like iced vinegar, and one taste is enough. After the soup, meat and vegetables are brought on, and then most delicious desserts.

With good crops and under good governmental conditions the Russians can live as well as any other people, but when the crops fail and revolutions occur there are great famines, when thousands starve. At such times, some try to live upon roots and bread made of grass with a small mixture of grain. Many die, and their sufferings are terrible.

LI. NIZHNI NOVGOROD — A LAND OF
GREAT FAIRS

WE are at Nizhni Novgorod (nyĭzh'nyĕ nôv'gô-rôt) on the Volga this morning. From Moscow we have come by train several hundred miles to the eastward, and are now on a high bluff overlooking the great river at the place where the Oka flows into it. Upon a hill above us is a huge fortress, and behind and about us a city of fine streets and large public buildings. It contains about one hundred thousand people, and its business and traffic make a din in our ears.

Below us, on the tongue of land formed by the junction of the Volga and the Oka, is another city more than twice as big, with a traffic noisier and busier than that of the town on the bluff. It is the Fair City of Nizhni Novgorod, which in late summer, when conditions in Russia are normal, is one of the liveliest trading places of the whole world, but for the rest of the year is deserted and dead. For about ten months it is as quiet as a graveyard. Then its stores have no merchants, its theaters no actors, and its buildings are as deserted as the catacombs far underground near the city of Rome.

Just now the fair is at its thickest and the town is alive. It has many thousand buyers and sellers of goods from western Asia and from all parts of Russia, and millions of dollars worth of merchandise is bought, sold, and traded every twenty-four hours. The trading will continue for several weeks, after which the people will all leave and the city be deserted until this time next year.

We can see the Fair City as we stand on the bluff. It is washed on one side by the Volga and on the other by the

Oka. Both rivers are filled with shipping, loading and discharging goods. There are miles of wharves covered with merchandise, and carts, wagons, trucks, and even rude wheelbarrows are moving to and from the Nizhni Fair.

There are also shaggy-haired Russians in long boots and



Nizhni Novgorod. The great Fair City is on the island

clothes of red cotton, who are carrying boxes and bales on saddles on their backs. Here they drag along iron rails with their hands, and there they roll boxes over and over. The river banks are covered with mountains of cotton and wool, and near by are pens packed high with all sorts of goods.

As we look down we can see that the Fair City is not like any of the world fairs we have in America. It has substan-

tial buildings of stone and mortar, with miles of streets paved with cobblestones, and with sidewalks of stone. It has street cars and electric lights. It has big hotels filled with guests and great churches presided over by long-haired priests in gowns of gold brocade. It has policemen to keep it in order, and its people represent all the races and nations in this part of the world.

Suppose we walk down from the bluff and cross the bridge of boats which leads into the town. On our way over we pass all sorts of vehicles. There are Russian wagons pulled by shaggy horses with high yokes over their necks, and driven by shaggy men in red shirts, black trousers, and yellow straw shoes. At our right is a caravan of hides, and behind it a train of wagons filled with hogsheads of wine, while at the left pass some trucks loaded with steel. See that cart coming toward us. It is piled high with skin-covered boxes marked with strange characters. The boxes contain tea. They have come here on camels from China. Behind are carts loaded with cotton from Turkestan, and still farther back are loads of wool, hardware, and tools of all kinds.

Watch out for the droshkies! The drivers are pushing rapidly in and out through the crowd, and foot passengers must jump quickly to keep out of their way.

But here we are in the city. The traffic is as thick as it was on the bridge, and sidewalks and streets are thronged with people on foot. We make our way through a crowd of Russians, Persians, Turks, Chinese, and Armenians, going from section to section to examine the goods. There is one street devoted to rugs, perfumes, and all sorts of wares from Turkey and Persia and another where the goods are altogether Chinese. Near the wharves are great piles of lead, iron, and copper, and beside them are piles of chains,

copper plates, and pigs of lead and iron laid up like cord-wood.

We spend some time in the fur markets, pricing skins which are worth almost their weight in gold, and wander about through the jewelry shops, where are great stores of precious stones and brooches, breastpins, and rings of gold and silver, made by the Russians. We find one place devoted to the selling of icons and sacred pictures, and another whose only merchandise consists of bells of all kinds, from the size of a dinner bell to some as big as a tent. The bells shine like silver. They are made of bronze and white metal, the larger ones costing thousands of dollars.

Much of the goods of this fair is sold in bulk, and most of the business is wholesale. There is also some barter or trading of one kind of goods for another, and the commerce is after the same fashion that was common all over Europe during the Middle Ages.

Russia has always had many fairs similar to this, although not so large. They take place at different times, and one could go from one fair to another and keep busy all the year through. In central Russia there have been as many as two thousand fairs in one year. In eastern Russia three thousand, and in the south more than eight hundred, where many million dollars' worth of merchandise changed hands. The Baltic region has had more than fifteen hundred fairs, and along the Arctic Ocean there were four hundred, which sometimes did a business of more than seven million dollars a year.

The great fur fair at Irbit (ĭr-bĕt') is held during the month of February. It is largely frequented by the Siberians and Chinese. It deals in teas, silks, camels' hair, and goats' wool from China and central Asia, in fur, hides, honey, and butter from Siberia, as well as



Loading boats with firewood on the Volga River

wares of all kinds from Russia in Europe. A big fair devoted to timber and wood products is held in June not far from Nizhni Novgorod, and later in the year stock fairs come on in the south, where great droves of horses, cattle, and sheep are brought in from the plains for sale. In addition to these, there are metal fairs, and fairs where hops, flax, or sheepskins are the principal articles for the buying and selling of which the people come together. In the Caucasus Mountains there have been one hundred and fifty fairs of various kinds, and in Siberia more than five hundred, while in the provinces of central Asia tributary to Russia are fairs where but little money is used. Here the standard of value is sometimes a one-year-old sheep, and a person buys so many sheeps' worth of cotton or camels' hair, or purchases a horse or cow in the same way.

These methods of trading are due largely to the backwardness of Russia in civilization. They will pass away in time, and with new roads and railroads most of this business will be carried on as it is in the United States and other parts of the world.



LII. DOWN THE VOLGA TO THE CASPIAN SEA

WE are steaming down the greatest river of Europe on our way to the Caspian Sea. Our vessel is of steel, and is much like those of the Mississippi. It burns fuel oil, and clouds of black smoke pour forth from the funnel and follow us as we move on down the stream. At Nizhni Novgorod the Volga is more than a mile wide, and

it narrows and widens in its winding course of fifteen hundred miles from there to the sea. The current is not swift, for the slope of the great plain is gentle. Indeed, the whole fall of the river from the source to its mouth is only a few feet more than that of a bucket of water thrown out from the top of the Woolworth building in New York to Broadway below. Still, the stream is swift enough to float many barges and rafts for hundreds of miles down through the plain.

We pass boats loaded with firewood, and go by huge rafts of logs and lumber, some five hundred feet long, moving down with the current or being slowly towed by side-wheel steamers. Many of the rafts have log houses upon them, with little vegetable and flower gardens where the men who have charge of the raft raise vegetables during their long voyage from the forests of the north to the Caspian.

The Volga is about as long as the Mississippi from Lake Itasca to the Gulf of Mexico, and is connected by canal with the Neva, and by other canals with the Dvina, so that the two form a waterway from the Arctic Ocean and the Baltic Sea clear across Russia. There is also a canal joining the Oka River with the Don and the Black Sea so that the traffic of the Volga comes from and goes to almost all parts of Russia.

We see barges loaded with bales of cotton grown in Turkestan in central Asia and low tank steamers filled with oil from the Caspian coming upstream. We pass steamers bringing north the fish caught in the lower Volga, as well as rugs, carpets, and silks from the Caucasus Mountains. The boats move back and forth like a caravan. In all, over two thousand steamers ply on the main stream, forming an endless procession of large and small vessels. Much of the freight consists of manufactured goods from the region

about Moscow and not a little of the goods sold at the fairs. The Volga and its tributaries have so many miles of navigable waterways that if joined together they would reach as far as from New York to San Francisco and across the Pacific to Yokohama, and leave some to spare.

The river is winding, and the scene continually changes. Now we are going north, now south. Now we seem to be steaming through a great lake, and now the stream is so narrow that standing on the deck we can take snapshots with our cameras of the people and scenes on both banks. One day we have a storm, and the water changes from silver to ink while the fierce winds from the plains sweep over our vessel. The storm passes, and the sun sets in a blaze of red over the golden wheat fields in the western horizon.

At every few miles we pass villages of log huts, and now and then stop at a city. There are forty cities on the Volga, and more than one thousand towns and villages. We see many windmills and the spires and domes of churches seem to be always in view.

Our first long stay is at Kazan, about a day and a night below Nizhni Novgorod. The city lies on a plain about four miles from the river. The plain is so low that it is flooded during high water. We cross it in droshkies, moving in and out with the stream of traffic from the town to the Volga, and make our way through this, one of the oldest cities of Russia. Long ago it was the capital of the Tartars, those almond-eyed, yellow savages who came out of Asia and at various times for two hundred years fought with the Slavs. They were finally conquered by the Russians, but many of them remained in Kazan. Since the Revolution the city has been made the capital of the Tartar Republic. They wear caps of black Astrakhan fur, and their heads are closely shaved.

Most of the Russians have long hair and wear caps with visors. Along the streets are Tatar women who hide their faces as they go by. The Tatars are Mohammedans, and the women are not supposed to show their faces to any men but their husbands.

A little further south we stop at Samara (sà-mä'rá), a large city with scores of windmills about it. It is on the left bank of the river and on the main line of the Trans-Siberian railroad. It has several large churches and some fine buildings of Russian style.

Our next stop is at Saratof, a town about as large as Columbus, Ohio. We are now in a rich grain-growing region, and everywhere we see large fields of wheat, oats, and rye. There are vast pastures with herds of cattle and horses, and great flocks of sheep. We see also oceans of sunflowers, with their golden blossoms swaying to and fro in the wind.

The Russians raise sunflowers for their seeds, and find them a profitable crop. When pressed, the seeds yield an oil which is used for salads, and cooking, and also for making candles and soap. The refuse of the seeds, after the oil is squeezed out, is good for live stock, pigeons, and poultry. The people eat the seeds as we do peanuts, keeping some in their pockets and nibbling at them from time to time. The sunflower is rich in honey. A yellow dye is made from its blossoms, and in some districts the people use the fiber of the stalks, which is much like that of flax or jute. We are told that the seeds are sown late in the fall or in the early spring, and harvested in summer. The crop is grown somewhat like corn. An acre of sunflowers should yield about fifty bushels of seed.

At Stalingrad, a town of about one hundred and fifty thousand, we take on a cargo of watermelons, buying



Gathering sunflower seeds to be made into oil

some from the peasants, and enjoying the rich red, juicy flesh.

As we approach the Caspian Sea, we pass many fishing villages, and watch the fishermen casting their nets. From the Volga River and the Caspian are taken each year more than one billion pounds of fish. A large part of the catch is made up of herring, but the most valuable fish is the sturgeon, which is prized for its eggs, from which caviar is made. The sturgeon grows to great size, and it is said that a single fish has been estimated to contain as many as three million eggs. More than fifty million pounds of sturgeon are often taken from the Volga and the Caspian in one year. The Black Sea is famous for its oysters, and the White Sea for herring, cod, and salmon. The Baltic yields a great deal of sea food, and fish are caught in all of the rivers.

We try some caviar at Astrakhan. The little black fish eggs are salty and bitter, but they give one an appetite. They are so much prized that hundreds of men are engaged in preparing them for the market. They are eaten all over Russia, and are exported to all parts of the world. Much is sent to the United States.



LIII. IN THE CAUCASUS MOUNTAINS — PETROLEUM AND OTHER MINERALS

ASTRAKHAN is the chief port for the northern side of the Caspian. It is not on the sea, but on an island about sixty miles up the river in one of the many mouths of the Volga. Most of the freight is transferred here on its

way north or south. There are seventy docks about the city, and over four thousand vessels call every year. The port has a great trade in fish, grain, timber, rhubarb, and drugs. It deals also in silk goods and stuffs and fine wool from the Caucasus Mountains, in oil from Baku, and in raw cotton from Asia.

Leaving Astrakhan, we are almost a day reaching the Caspian Sea, and we spend another day in steaming on to Baku. The water is rough, and we are rolled about in our little steamer more than during our entire passage across the Atlantic. Some of us are seasick, owing to the caviar we ate at Astrakhan, and we are glad when the tall derricks near Baku come in view, and we land from the steamer in the great oil fields of Russia.

The Caspian is the largest of all lakes, and the winds from the Russian steppes roll up immense billows upon it. The spray that comes over our vessel has a strong taste of salt, and makes us think of the ocean.

The Caspian is lower than the level of the sea. It is eighty-five feet below the surface of the Black Sea, which we left at Odessa, and it is surrounded by lands which are half desert in places. As we approach Baku, we can see the Caucasus Mountains.

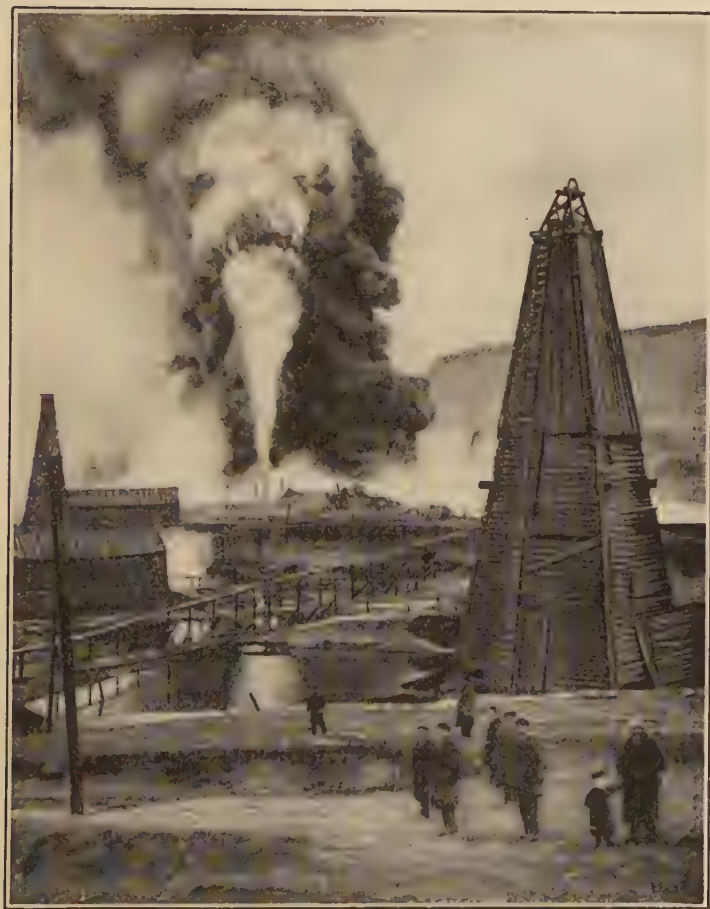
There are many oil derricks lining the shore, and we seem to be steaming through oil as we approach the harbor. There is a strong smell of petroleum from the tankers at anchor, and from the tank cars and pipes that bring the oil to the port. Upon landing, we ask for a drink of fresh water. We taste it and hand it back in disgust, for it is flavored with kerosene. In Baku much of the cooking is done with oil, the factories use oil for fuel, and the city for a long time was lighted with oil. To-day everything about seems to be mixed with petroleum.

We take a train and ride out through the oil fields of the Apsheron (âp-shě-rôn') peninsula adjoining Baku, passing through a forest of black towers sixty feet high, each standing above an oil well. When at last we get out and walk, the oil seems to ooze up under our feet. The scenes are something like those in the oil regions of the United States, except that our derricks are of open framework, while here they are boarded up, forming these towers, which are as black as though they were covered with pitch. The black comes from the oil and sand which spouted forth when the oil was first struck. Each tower has a little shed for the engine used for boring the well and pumping the oil.

The petroleum of this part of the world is nearer the surface than ours. Some of the wells are only two hundred feet deep, and many less than a thousand. When a good well is struck, the petroleum often bursts forth to a great height, falling in a dense shower all about. Sometimes the flow of oil is so great that it is impossible to save it, and it runs off in streams over the land. From one well bored not long ago, the oil rose to a height of four hundred feet and kept spouting for months. Within two years it produced enough petroleum to fill a ditch a yard wide, a hundred miles long, and more than six feet in depth.

These Russian oil fields are among the most important of the world, producing at times sixty million and more barrels in one year. This oil region has been known for ages. The Fire Worshipers of Persia considered it holy on account of the flames made by the natural gas coming from the ground, and there is a story that Alexander the Great killed a boy by drenching him with burning water.

For more than half a century after people learned how to refine petroleum, these fields produced about one third of all the oil taken from the earth, and even now Russia is one



An oil well at Baku, on the Caspian Sea

of the chief oil countries of the world. There is a great deal of petroleum yet to be mined here in the Caucasus Mountains, in the Apsheron peninsula, and in some of the islands of the Caspian Sea. There are oil fields in the Ural Mountains, and some in northern Russia, which are said to cover millions of acres.

The oil of Baku is carried to all parts of Russia by river and rail. It goes across the Caspian to Turkestan, and is transported on camels over the deserts of Asia. It is carried in pipe lines, five hundred and sixty miles long, through the Caucasus Mountains to the port of Batum on the Black Sea, and sent from there in tank steamers through the Bosphorus Strait, out past Constantinople to the Mediterranean, reaching many of the chief ports of Asia, Africa, South America, and Europe. The pipe line to Batum is so big that a cat could crawl through it. There are nineteen pumping stations which force the oil along through the pipe.

From the oil regions we take a train for Tiflis, the chief city in Georgia, a territory about as large as our state of Indiana, and containing millions of people. Tiflis is beautifully located in the valley of the Kura River, with the snow clad peaks of the Caucasus Mountains looking down upon it. The town is about three hundred miles by rail from Baku, and is where the trade routes from the Caspian to the Black Sea and from Armenia to Russia cross, its commerce consisting chiefly of the goods carried from one country to the other.

We are now in one of the fruit lands of Russia, and plums, peaches, and pears, as well as oranges, lemons, and other semitropical fruits, are sold in the markets. The hills about us are covered with vineyards, and in the valleys are fields of cotton and tobacco, as well as wheat and corn. There are many mulberry trees in the Caucasus Mountains,

which feed millions of silk worms, and we find beautiful silk goods in the bazaars. About three thousand villages are engaged in raising silk cocoons, and they produce many millions of pounds of them every year.

We spend several days in Tiflis, riding about the town, shopping at the stores, and making notes of the strange people we see on the streets. The citizens are mostly Asiatics, and there are many Persians, Turks, Georgians, and Armenians mixed with the Russians. The city is hot at this time of the year, and we enjoy our excursions into the mountains and to the mineral springs not far away.

We are now in the heart of the Caucasus range, which extends from northwest to southeast one thousand miles between the Caspian and Black Seas. We feel like going up many of the snow-clad peaks that kiss the sky all about us, and we should like to climb Mount Elbruz (ěl-brōōz'), whose top is more than eighteen thousand feet above the sea. It is the highest mountain in Europe, but it lies far out of our way, and we have several countries yet to explore, so we confine our travels to the region about, and then take the train for Batum, the oil port on the Black Sea.

Leaving Tiflis, the road winds in and out through the Caucasus Mountains. It passes through mineral regions of various kinds, and we stop for a day at Kutais (Kōō-tā-ěs') in the province of Georgia, about one hundred miles from Tiflis, south of Mount Elbruz, to visit the largest manganese mines of the world. These mines are estimated to contain about one billion tons of ore, or enough to supply the demands of our country and Europe for a generation or more.

Manganese is employed in the manufacture of steel, and is mixed also with copper, zinc, tin, lead, and other metals to make them harder and tougher. We have some of this

metal in the United States, but we import a great deal from Brazil and from this part of Russia. The manganese of Kutais is a vast blanket of ore seven feet thick. It is mined largely by Georgian peasants. The metal is brought to the railroad and carried to Batum or Poti (pô'tyĕ) on the Black Sea, whence it is shipped to all parts of Europe and to the United States.

Before leaving Russia, we should learn more about the enormous beds of minerals the country contains. Lead, copper, silver, sulphur, and coal are found not far from where we now are, and the Caucasus has also zinc, tin, and quicksilver. There are large copper mines in the Ural Mountains, which produce gold, silver, lead, iron, and tin, and most of the world's platinum. Platinum is a white metal which is worth several times as much as gold. It is used largely in jewelry, and in making munitions of war, airplanes, and chemical apparatus. The metal can be drawn out into wire no thicker than the fine hair of a baby, and is so strong that a bar of platinum as big around as a broom handle will lift a weight of one or two tons without breaking. The only other country where platinum is found in large quantities is Colombia in South America.

Russia has vast deposits of iron ore in its different provinces, and before the World War a great deal of the pig iron used in Europe came from South Russia, where large beds of coal lie close to the iron. The richest coal region is in the basin of the Donetz (dō-nyĕtz') River, north of the Sea of Azof (ă'zōf), where an area twice as large as the state of Massachusetts is underlain with coal, some of which lies at a depth of more than two miles. There are other rich coal fields in parts of the Ukraine, in the Caucasus, and in the province of Moscow.

Russia is one of the richest of all lands in asbestos, the

fibrous mineral which we use as a protection against fire, and it also has great beds of salt. It is rich in nearly every rare metal used in the arts. In fact, it is a vast treasure vault containing almost every kind of mineral used by man. Many of its mineral regions have not been developed, but all together they may some day form the basis of a manufacturing industry which will supply the human race with many of the things it needs.

It is a short ride from Kutais to Batum. All the way from Baku our train has been following the route of the pipe line that carries the petroleum from the oil fields of the Caspian to the Black Sea. We find tank steamers in the harbor taking on oil, and other vessels loading manganese ore, wool, timber, and also lemons and oranges, for the climate is almost tropical. Among the ships is a steamer bound for Constantinople, and upon this we take passage.

Take an airplane flight over Russia and describe the surface of the country. Compare the forests with those of the United States; the black plain with the Mississippi valley.

Give an idea of the size of European Russia. Compare it with the main body of the United States.

What is the Ukraine? Describe its chief seaport. How do we reach it from Rumania? What is the capital?

What mountains wall off a part of southern Russia from Asia? What range separates eastern Russia in Europe from Asia? Where is Mt. Elbruz? Contrast it with Mt. McKinley, the highest mountain in North America; with Mt. Aconcagua; with Mt. Everest.

Name the principal Russian rivers. Compare them with rivers in our country. Compare the Volga with the Rhine and the Danube. Using the canal from the Neva to the Volga make a trip by water from Leningrad to the Caspian Sea; from Astrakhan by water to Archangel using the canal which connects the Volga with the Dvina; from Danzig to Odessa.

Visit a village in the great black plain. Describe the houses, and life of the people.

Locate the Baltic republics. To what race do most of the Lithuanians and Letts belong? To what race do the Estonians belong? What is the chief port of each country? Describe it.

Name some of the chief cities of Russia and compare them in size with the cities of the United States. What are the principal ports? Mention one of the chief exports from each.

Tell the story of Peter the Great and the building of Petrograd. Under what government was the name Petrograd changed to Leningrad?

Describe Moscow. What advantages has it as a center for trade? How far is it from Leningrad? From Odessa? From London? Take a trip from your home to Leningrad, at 30 miles per hour by rail and 15 knots by sea. How long will it take you?

Name some of the great fairs of Russia, and describe their part in the trade of the people. Locate the city that has the greatest fair.

Trace on the map the voyage of a cargo of wheat from Odessa to London; a cargo of gasoline tractors and threshing machines from Chicago to Odessa; a shipment of cotton from New Orleans to Leningrad. How many miles would the cotton travel?

Name some important minerals of Russia. Mention some of the places where they are found. What other country has platinum? (See Carpenter's "South America.")

Where are the principal coal fields of Russia? The chief oil fields? Compare the oil product with that of the United States. Follow a shipment of Russian oil from Baku to Marseille; to Alexandria.



LIV. TURKEY — IN CONSTANTINOPLE

WE have crossed the Black Sea, and are now slowly moving south through the dense traffic that fills the Strait of the Bosphorus. This narrow channel, which separates Europe from Asia, joins the Black Sea to the little sea of Marmora (mär'mō-ra), and the Mediterranean Sea, forming the only southern outlet to the ocean from



the great country of Russia and all southeastern Europe. The channel is only eighteen miles long, and in places not half a mile wide. It is a deep mountain valley walled with hills which slope almost precipitously down to the water. There are castles and fortresses on some of the hills, and the scenery reminds us of the Rhine and the Danube.

As we approach the southern end of the strait, we see many palaces, and picturesque villages with fishermen's huts near the water, and now and then rich farms and forests.

At the southern end of the strait is a little peninsula, a tongue of land which extends far out and almost blocks the entrance to the channel. The northern side of this peninsula has a horn-shaped inlet, where big ships can anchor. This is the famed Golden Horn, the beautiful harbor of Constantinople. The city is built on the peninsula, which has walls around it close to the sea.

In our travels through Europe we have seen that there is always some reason for cities being where they are. Just as villages are built at the cross-roads to catch the trade of the people moving each way, so cities grow up on the highways of commerce, and especially where such highways cross. This is one of the reasons for the location of Constantinople. It is at the chief cross-roads of Europe and Asia, where the continents come so close together that goods brought in by rail and caravan from Asia can be shipped easily across the narrow strait to Constantinople, from which they can be sent on the trunk lines to the northward. It is also the natural water outlet of the great industrial and agricultural region of southeastern Europe, through which the grain, oil, minerals, and manufactures can be sent out to the ocean, and where cotton, raw materials, and manufactured goods can be brought in to supply the vast population of the great plain and the Balkan countries.

The situation of Constantinople was even more important in the past than it is now. It was founded about twenty-five hundred years ago under the name of Byzantium, and for centuries it formed the chief gateway from Asia to Europe. The silks of China, the spices and gums of India, the rugs of Persia, and the pearls, coral, jade, and other products of high value and small bulk were brought here to be traded for the metals and manufactures of western Europe, which came by way of the Rhine and the Danube to the

Black Sea. Indeed, this city might be called the port of the Danube, the Dnieper, the Don, and the other rivers that empty into the Black Sea. It is also the port of the Volga and the Caspian Sea, for, as we have seen, the Caspian and Black seas are now united by rail.

Constantinople owes its growth also to its strong position at the outer end of the Bosphorus. The peninsula can be easily defended and the forts there can keep vessels from going in and out through the strait. For this reason, it has been fought for again and again. At one time it was the capital of the whole Roman empire, and from the Roman emperor Constantine it got its name of Constantinople. It is, however, called Istanbul (ē'stän-bōl') by the Turks. In the Middle Ages the city was held for a time by the Crusaders, and a few years before Columbus discovered America, it was captured by the Turks and became the capital of the Mohammedan world.

The Turks were a fierce yellow race who had overrun Asia Minor and extended their conquests into Europe. They took country after country along the Danube and elsewhere, their territories reaching as far north as Vienna. They had still larger possessions in Asia, and chose Constantinople as their capital because it lay at the cross-roads of the continents. They still hold it by the consent of the Great Powers of Europe, because if it belonged to the Russians or any other great nation, it might be used as a center from which to control the Suez Canal and the land routes to India. The Turks have lost all their territories in Europe except this city and a comparatively small area lying west of it. They have also lost a large part of their vast possessions in Asia.

But we are now at the southern end of the Bosphorus and right in front of Constantinople. The Golden Horn is

filled with vessels of every description, which are manned by sailors of many different nationalities, and hundreds of little Turkish gondolas, containing passengers and pleasure hunters, are moving in every direction. Steam launches and tugs are darting in and out through the shipping. All our surroundings appear very strange to us.

We are on the water, but nevertheless almost in the midst of the great city. There on the right bank of the Golden Horn are marble palaces once occupied by the Sultan, some high up on the hill, and others on the edge of the water, while farther on are houses, great hotels, and other business structures of Pera (pā'rā), where the Europeans live.

At the left, on the opposite bank of the Bosphorus, a village of pink and yellow houses of curious shapes rises out of green trees. That land is Asia, and the town is Scutari (skōōt'ä-rē), one of the suburbs of Constantinople, where many of the Turks who do business here live. Right before us on the peninsula is the main part of the city. It is known as Istanbul and contains bazaars, hundreds of mosques, public buildings, and the dwellings of the seven hundred thousand who make up the population of the Turkish metropolis.

As we come to anchor, the city rises straight up from the sea. There is a low ruined wall about it, but behind this are palaces surrounded by green. The city slopes upward and as it lies before us it seems a vast rolling expanse of white buildings with huge domes and tall white towers. Each of those domes belongs to one of the great mosques or Mohammedan churches, some of which cover acres; and the white towers are their minarets. The minarets have galleries about them in which with our glasses we can see dark-faced men in turbans and gowns who are calling the

people to prayer. We hear their shrill tenor voices coming over the water, and see the Mohammedans on our ship kneel, facing Mekka, and bow their heads again and again to the deck as they utter their prayers.

Now we have landed at Pera and walked through the business part of that city down to the bridge of boats, which is the main highway across to Istanbul. We have paid our toll to the Turk at the entrance, and stopped in the middle of the bridge to gaze at the strange throng which moves back and forth on its way to and from the main part of the great city.

Constantinople is a mixture of races. Standing as it does at the cross-roads of the continents, it has citizens from all parts of southeastern Europe and southwestern Asia. There are thousands of Persians, Circassians, and Georgians. There are Rumanians, Bulgarians, and Greeks, and Jews from Russia and all the countries about. There are more Turks, perhaps, than any of the others, but the languages are almost as many as were heard at the Tower of Babel.

There are men in long gowns, with white, red, blue, or green turbans about their heads. Their red or yellow slippers are turned up at the toes, and their heels clap the boards as they walk. Their faces are dark, and their eyes somewhat slanting; many have long beards which fall down on their breasts. Most of those men are Turks, and all are Mohammedans. We see also hundreds of dark-faced men wearing clothing like ours, but the red fez caps which were formerly worn, have been replaced with hats like our own.

But what are those two curious creatures now coming toward us? As they enter the bridge, in the distance, each looks like two mammoth sausages tied together, one on top of the other. Those are two Turkish women, who



A track meet at a modern girls' school in Turkey

have their heads and faces so wrapped up that they hardly seem human. Now they are closer, and we see that each wears a veil, so that only the eyes and a strip of the forehead are visible. One of the women has a black servant with her, a slave who is going along to guard and protect her. Some Mohammedan women still follow the old custom of not showing their faces on the street, and indoors they are rarely seen by any other men than their husbands. Many Turkish women, however, have discarded the veil and appear on the streets in clothes similar to those we wear.

Get out of the way of that porter! Don't you see the enormous box he is carrying on his back, bending over so that he can hardly look up? He is one of the drays of Constantinople, and he competes with the donkeys and camels for his share of the freight. There are few heavy vehicles in the city, although now and then we see a motor-car or a truck. Boxes of all kinds are carried about by porters, called hamals (*hå-måls'*). The boxes rest on a leather saddle of the shape of a wedge. This saddle is about a foot thick at the base and is fastened to the small of the back. Some of the men are so strong they can carry as much as five hundred pounds at one load.

But let us walk on over the bridge, keeping close to the railing and out of the way of the carriages, donkeys, and camels, and of the turbaned soldiers riding Arabian horses. We walk behind a Greek priest clad in black, who strolls along arm in arm with a Circassian in uniform, wearing a high cap of astrakhan fur. As we go on we are accosted by beggars in turbans. We pass peddlers and hucksters dressed in all the colors of the rainbow, and selling all kinds of goods. We stop one for a drink from the great bottle of lemonade on his back, and from another buy some Turkish fig paste for which Constantinople is famous.

Now we have left the bridge and have made our way through the narrow winding streets to the bazaars, where we can learn how they do business in this Mohammedan city. We push our way through the crowds at the entrance, and enter a town of stores all under one roof. There are acres upon acres of little cell-like shops ranged along narrow cobblestone streets and lighted here and there by small domes. Many of the stores are not bigger than packing boxes. Here is one so small that it is filled by the merchant, who sits cross-legged on the floor, with his goods piled around him. Other shops are larger; and some are furnished with divans upon which long-gowned, long-bearded men sit and smoke and drink coffee as they bargain. The floors of the stores are as high as a chair, and we sit on the floor with our feet in the street as we shop.

All business is done by bargaining, and it takes us a long time to make every purchase. It is customary to find fault with the goods, and to offer only about one third what the merchant demands. When he refuses, we come up a few cents, and if he will make no reduction whatever, we start away expecting to be called back, as is often the case, although he protests that such a sale will ruin his business. There are no fixed prices, and the dealers take whatever they can get.

The Turkish storekeeper sends out a servant for coffee, and we drink as we bargain. The coffee is served without cream, in a little cup no bigger than half an eggshell. It is as thick as chocolate, and almost as sweet as molasses. We are told that it is made of the roasted beans pounded to a fine powder. We grow fond of it, although it seems more like a sweet syrup than coffee.

We spend a long time in the bazaars, strolling about through one narrow street after another. Each section

has its own kind of goods. We walk through roofed alleys walled with slippers and shoes of the brightest colors and of all grades and prices. There are men's shoes of red leather made without heels and with the toes turned up at the ends like an old-fashioned skate. There are ladies' shoes of fine silk in the most delicate shades of pearl, pink, and sky blue; some of them are covered with gold and silver embroidery. We each buy a pair of children's shoes to take home. They are of red leather, with a tassel of wool as big as a walnut on each toe. Under the tassel is a bell, so that the little Turks actually go about with bells on their toes.

We stay some time in the Persian bazaars, looking at beautiful shawls and other things. We stop in the perfumery sections to buy some attar of roses, for this is one of the lands of that delightful perfume. We saw how it was made during our trip through Bulgaria.

Passing through the spice bazaar, we enter streets where scores of merchants are selling the beautiful carpets and rugs of the orient. The rugs are made on hand looms by the women and girls in their homes. Only a few square inches can be made in one day, and the larger rugs require many months of continuous work.



LV. AMONG THE MOHAMMEDANS

OUR first business this morning is to learn something of the Republic of Turkey and how it is governed. The World War and the later war between Turkey and Greece were largely responsible in bringing about very important

changes in the government of Turkey. The Turkish Empire had existed for more than six hundred years. The ruler was called the Sultan, and the government was an absolute monarchy, until recent years, when a parliament of two houses was elected by the people. The Sultan was not only the civil ruler of the Turkish people, but also the Caliph, or head of the Mohammedan religion, which is professed by more than one hundred million people in different parts of the world.

In 1920 a revolutionary government was set up at Angora, in Asia Minor, in 1922 the Sultan was deposed, and in the following year the Republic of Turkey was established, with Angora as its capital. Constantinople, however, remains the largest and most important city of Turkey. The old parliament was replaced with a legislative body known as the Grand National Assembly. Mohammedanism is the established religion, although the office of Caliph has been abolished.

The Turkish Empire once included a large part of Asia, Africa, and Europe, but country after country has been taken from it by the other nations, and new states and dependencies have been formed of them. Turkey now has no land in Africa and comparatively little in Asia. The possessions in Europe now comprise but a small part of the Balkan Peninsula, about ten thousand square miles.

The people of Turkey are poor. When the Sultan ruled his officials preyed upon the people by demanding large taxes. The laws provided that one tenth of all the crops should go to the government, and the officials came out to harvest fields and carried away their share of the grain. There were heavy taxes on imports and exports so that comparatively few industries were established, and the minerals and other resources were but little developed.

Education has been backward. The chief teachers were the Mohammedan priests, and the schools were largely connected with the mosques. Now there are government schools, and educational standards are improving.

Turkey is a Mohammedan country, ruled by Mohammedans, and all of our surroundings show the evil effects that Mohammedanism has upon the people and their advancement in civilization and wealth. In Constantinople the greater part of the citizens are Mohammedans, the remainder being made up of Greeks, Armenians, and Jews, besides people from every part of Europe.

Let us visit Santa Sophia, and see something of this interesting religion in which so many millions of people believe. There are thousands of mosques in the world, but the finest of all is Santa Sophia, in the center of Constantinople. When Santa Sophia was built as a Christian church centuries ago, ten thousand masons worked on it for seven years, and one hundred architects were required to oversee its construction. The church had doors of ivory, amber, and cedar, and its altar was of precious stones imbedded in gold. The famed temples of Ephesus, Thebes, Athens, and Rome were robbed of columns to decorate it, and when it was completed it was a huge mass of rare woods, precious marbles, gold, and jewels. When the Turks conquered Constantinople, they defaced the paintings, tore down the altars, and turned the church into a mosque. The building is of the shape of a Greek cross and covers as much ground as the Capitol at Washington. Its vast roof is upheld by a forest of columns, with a central grand dome.

We shall first enter the court. Here we are stopped and asked to take off our shoes by the turbaned, long-gowned Turks guarding the doors. The Mohammedans consider their churches holy, and no one is permitted to enter with



This view of Constantinople shows the mosque of Santa Sophia at the upper left corner

his shoes on. On our way in through the court, we see hundreds of Turks washing themselves at the fountains before they go in to pray. The good Mohammedan prays five times every day, and he must wash his face, hands, and feet before every prayer.

Entering the mosque, we walk through corridor after corridor, and later attend one of the evening services when the huge building is lighted by thousands of lamps. The great stars of flame seem to float in the air between the dome and the floor.

The service has already begun. We are in one of the galleries, and the floor below us is covered with worshipers. At least five thousand Mohammedans sit on their knees with their faces toward Mekka. They are clad in turbans and gowns. Their shoes lie in front of them and the soles of their bare feet are turned up to the gallery. They form long lines of color upon the white mats down there under the floating flames. All are praying in response to the shrill cries of the iman, or priest, who stands in the pulpit at one end of the vast church and leads the service. He utters a sentence, and the long lines of turbaned men below us rise and fall like clockwork in their devotions. Now they stand ; now they kneel in prayer, and the striking of ten thousand knees upon the floor sounds like the rumbling of cannon in the distance. Now they bend their heads to the mats, and the sound comes up like the fall of a great weight, rather than the touch of thousands of human heads.

The Mohammedan methods of worship are fixed by the Koran, or Mohammedan bible, and the people all pray the same way. They are not ashamed of their religion, and we see them reading their Korans in their stores, and kneeling down in the bazaars. We observe them praying in the

fields outside Constantinople, and near every mosque see thousands of them washing themselves before going in to worship.

When the Sultan ruled Turkey he had his own mosque not far from his palace, where he went to pray on Friday, which is the Mohammedan Sabbath. Once a year he made a great show of kissing the mantle of the prophet Mohammed, which is kept as a precious relic in Stambul.

According to the Mohammedan law, every true believer has the right to four wives, although most Mohammedans have only one. The chief reason for this is that the better class women do but little work, and only a rich man can support several wives. Moreover, the Turks say that with one wife a man may have peace in his family, but that more often bring trouble and discord.

When we visit the Mohammedans in their homes, only the girls of our party are permitted to go into the women's apartments. It is not polite for a man to ask after the wives and daughters of his friends. The sexes are kept apart, and the man seldom sees his betrothed until the wedding. The marriage is arranged by the parents, and the young people are supposed to take without question whomsoever their fathers and mothers select. In many Mohammedan families the men and women do not eat together, nor do the sexes associate with one another at parties.

The Turks are polite. They are continually making courteous remarks to one another. When we meet them they say in Turkish, "May thy day be happy," and if we would be as polite as they are, we must reply, "May thy day be happy and blessed." The people are hospitable, and we are frequently asked out to dinner. They usually eat but two meals a day, one at ten o'clock in the morning,

and the other at sunset, although they may take a cup of coffee on rising. They do not use tables, but have their meals served on trays, some of which are as large around as a washtub. In the center of each tray is a mat on which the hot dishes are put with the salt, pepper, pickles, and other such things about them, new trays being brought in with the different courses.

At a real Turkish meal, in the interior of the country, every person has his own spoon, and helps himself to the soup in his turn. Meat and other things are often brought on in small pieces, and are eaten with the fingers. The people are dainty, touching the food only with the thumb and first two fingers, or dipping it out with a piece of bread doubled up and held in the hand. One Turk, being asked if he did not think our way was cleaner, said: "Every one knows whether he has washed his fingers, but one never can tell who washes the knives and forks!"

We find the food good. One of the most common dishes is pilaf (pē'lāf), made of rice and chopped meat stewed together. This is served at almost every dinner, and when well cooked is delicious. We enjoy the Turkish fig paste and nougat, or candy of nuts and sugar, and also the rose jam which the servant brings in with a glass of water and a spoon. We eat the jam in the approved Turkish fashion, taking first a spoonful of jam and then a swallow of water. The water dissolves the jam and leaves a taste of perfume in the mouth.

Locate and describe the Strait of Bosphorus.

How far is Constantinople from Paris? from London? from Vienna? from Berlin?

Describe Constantinople. Why has it become a great city? Why are the Turks permitted to hold it?

To what race do the Turks belong? Where do they come from?

How is Turkey governed? Who are the Mohammedans? Have we any Mohammedans under our flag? (See Carpenter's "Australia and Islands of the Seas.")



LVI. IN MODERN GREECE

OUR travels to-day are to be through one of the great fairylands of the past. At the southern end of the Balkan Peninsula, almost surrounded by the most beautiful of the world's salt seas, is a little country from which have come some of the strangest tales ever told. It has tales of huge giants, who breathed forth fire and flame; stories of Pegasus, a winged horse that flew through the air carrying its master over mountains and seas; and stories of Ulysses, whose comrades were turned to swine by the wicked witch, Circe. Greece has tales of gods and goddesses, of sweet-singing sirens, of horrible harpies who were half bird and half woman, and of centaurs who were half horse and half man. Indeed, it has so many strange stories that we have not time to mention them all. You may read them in the poems of Homer, who lived several thousand years ago, or better perhaps in the "Tanglewood Tales," and "Wonder Book," of Nathaniel Hawthorne, who has retold them in a beautiful way.

This wonderland is Greece, a little country as large as Florida, and like it situated in summer seas. Greece is a mountainous land, and the islands about it are rugged and wild. In places the mountains rise almost straight up from the coast, and the sea here and there runs so far into the land that there is one mile of coast for every ten

square miles of surface. The country has more coast line in proportion to its area than any other, and this, with its many good harbors, made it easy for its people to trade with the other countries about, and they soon became civilized. They had cities and towns and cultivated farms when northern Europe was inhabited only by savages. They formed some of the first republics, and long ago learned to govern themselves and make their own laws.

Greece was long a kingdom, but in 1924 the king was dethroned, and Greece established as a republic. The laws are made by the parliament which is elected by the people.

The Greeks have always prided themselves upon their strength. In ancient times they held public games where the men and boys from everywhere came to see who was the strongest and most skillful. They have such games to-day, and in Athens there is a great stadium of marble in which athletes, not only from all parts of Greece but from many other countries, come to run races, vault with poles, and strive to jump the highest and farthest. The Marathon, the longest foot race now run, originated in Greece.

The old-time Greeks were artistic; they created some of the grandest temples and most beautiful statues the world has ever known. They were famous as orators, poets, and scholars; and their language was so beautiful, and their methods of thinking so clear, that their literature is still studied in our own and in other colleges all over the world.

Largely owing to their many excellent harbors, the ancient Greeks became a sea-going nation and their huge boats, propelled by three banks of oars, went to all parts of the Mediterranean Sea to exchange their products for those of other lands. Like the Greeks of to-day, they were noted as traders; and they soon amassed so much wealth that neighboring nations made war upon them. They were



Above the city of Athens stands the Acropolis

attacked by the Persians, and later were conquered by the Romans, who may be said to have almost adopted the Greek civilization. Many Roman boys went to Greece to school, and Greek culture and refinement were carried from Rome to all parts of southern Europe.

Hundreds of years later, Greek civilization came into northern Europe, and modified somewhat by the different peoples, was brought across the Atlantic to America. Indeed, in this little country we may find the source of many of our own manners and customs. For this reason it has been called the cradle of our civilization.

All this came from the ancient Greeks, who lived long before Christ was born. Since then the country has been conquered again and again, and its people have been so oppressed by their savage victors that they have become at times almost barbarous. During the Middle Ages they were overrun by the Goths, and when the Turks captured Constantinople they took Greece and ruled it for generations. Finally, through the aid of the Great Powers of Europe, the Greeks fought the Turks and again became independent. The Greeks of to-day control territories having an area larger than that of Illinois, inhabited by about six million people. Their two principal cities are Athens and Salonica.

We are a little more than a day coming by steamer from Constantinople to Greece, although the distance by sea is not much farther than from New York to Boston. We land at the port of Piræus (pī-rē'us) and are whirled in automobiles over the dazzling white road which leads to Athens only five miles away. We are now in the capital of old Greece, and in that of the new Greece as well. What a beautiful city it is, and how modern! It has magnificent buildings of the purest white marble, and thousands of

two, three, and four story houses, all brick, covered with stucco. The walls of the houses are painted yellow, rose pink, and sky blue, and their roofs are of gray or red tiles. There are no very tall buildings and no church spires as



Our travels through Greece

in other big cities of Europe. Here and there is the blue dome of a Greek Orthodox church, and occasionally, rising out of a garden, a clump of tall cypress trees. There are no factories to speak of; the city is free from smoke and, save for the white limestone dust, is exceedingly clean. It has palaces with gardens about them, and parks with trees and beautiful flowers. The business

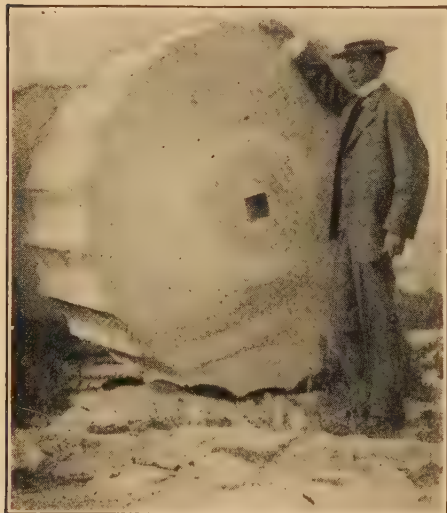
streets are wide and paved with asphalt. The stores have plate glass windows, out of which show dry goods, jewelry, millinery, and other such things. The chief shopping hour is from five to seven in the evening, when the streets are thronged with well-dressed women and men.

Do you hear that locomotive? Its whistle announces the arrival of the steam cars from the Piræus; another train is just due from the city of Patras (pä'träs), another port on the opposite side of the peninsula. Step to one side to let that motor truck pass, and keep out of the way of those automobiles and motorcycles which are coming down the street! We thought we were in one of the oldest places of the world, but we seem to be in one of the newest. Athens has street cars and is lighted by electricity. It has wireless, cable, and telegraphic connection with all parts of the world, and everything seems modern rather than ancient.

Only when we go outside of the town and climb the hill of the Acropolis do we realize we are on the site of old Athens. This hill is a gigantic block of rose-colored limestone which rises two or three hundred feet above the plain upon which Athens stands. It is on the edge of the city and formed one of the principal parts of the Athens of the past. The crest of the Acropolis is a plateau of about ten acres, still covered with broken columns, marble statues, and other remains of ancient Greece. Here are the ruins of the Parthenon, one of the most beautiful temples of antiquity. Some of the great columns which upheld its roof still rest on their pedestals; they rise from a marble floor covering nearly an acre, and on the tops of some of them the cross stones of marble still stand. The columns are as big around as cart wheels, and extend to the height of a three-story building. The ruins are visible far out at sea.

The Parthenon was built in honor of the goddess Athena,

whose statue was erected within. The statue, made of ivory and gold, was as high as a four-story house. Near the Parthenon are the ruins of another temple, whose



This shows the thickness of a column of the Parthenon

marble portico is upheld by Grecian maidens in marble, and there are so many other wonderful ruins in Greece, that it would take us months to explore all of them.

We are more interested in the Greeks of to-day. As we go down from the Acropolis, we meet a man driving some goats. He is dressed in short skirts and tight trousers, with an embroidered jacket

that comes to his waist. He has on red shoes, on the toes of which are black tassels, as big as a chestnut bur, and what looks like a red night-cap on his head. He is one of the milkmen of Athens and is driving his dairy in from the country. See, he is stopping at that house over there and is milking one of the goats for the servant girl who stands by his side and looks on! Many of the Athenians drink goats' milk, and, to be sure it is fresh and unwatered, they insist that the goats be driven from house to house and milked at their doors.

Do you want a ripe orange, or some figs fresh from the trees? If so, you can buy them cheap of that Greek boy coming down the street. He has two little donkeys loaded with baskets of fruit. Greece is a land of fine fruits. It has delicious oranges, and they are so cheap we can buy all we can eat for a very few cents.

But you may desire something sweeter! If so, we shall call to the old woman on the other side of the street. She has a thick comb of honey fastened to a branch in her hand. It is the honey of Hymettus, from the yellow flowers on the mountain of that name. The flavor of this honey has been noted for ages.

But see the boy coming out of that alley there at the left. He is carrying some smoking roast beef on a plate. Behind him is a girl with a dish of baked fish sprinkled with onions and farther back are several children who have loaves of smoking hot bread fresh from the oven. Where can they be going? They must be on their way to supply some great public dinner. No; each child is carrying the food for his own family. The dishes are dressed at home, and taken to the public baker to be cooked at so much per dish. The Greeks have small kitchens, and the ordinary cooking stove is not fitted for roasting and baking. It consists of a brick or stone ledge built out from the wall with several small holes in the top. Each hole has a grating, and there is an opening below at the side through which comes the draft. Upon the grating a little charcoal is put, and the fire is made hotter by fanning. Only boiling and stewing can be easily done on such stoves, so the large roasts are sent to the public cook and the baker.

If we should follow those boys into their houses, we would discover that the poorer Greeks live simply. Many of the houses have but two or three rooms, and some of them are

built around courts without yards or gardens. The well-to-do classes have homes much like those we saw in Brussels and Paris. They live in apartments, a number of families in the same house. Only the rich have separate houses.

As we go on with our walk we see all sorts of peddlers. Here comes a man who carries long strings of onions and garlic, which he has woven together and sells at so much a string. There is a boy driving some turkeys from house to house so that the customer may pick out the bird he wants from the flock. Other boys are selling lemonade and candies, and others cry out they will black your boots while you wait. There is so much dust in Athens that it is hard to keep one's shoes clean, and we shall need several "shines" every day. We also see many priests dressed in high caps and black gowns and men in skirts and red caps riding on horses and donkeys. We pass private soldiers wearing the national uniform of a jacket and petticoats and smart-looking officers in suits of white linen.

A great deal of business is done on the streets. We see women wearing the long loose gowns of the country, knitting outside their houses, and shoemakers are pegging away on the doorsteps. At the tables outside the cafés men are playing dominoes while they drink coffee, chatting, or reading the papers. The coffee is black, and costs about three cents a cup. Some of the men who are talking about public matters are excited. The Greeks are fond of politics, and almost any man or boy you meet can tell you just how the governments of the whole world should be run.

The Greeks are proud of their country and of their progress after they became free of the Turks. Since then they have improved Greece in every possible way. They have built miles of new railroads and have redeemed large tracts of land.

The people of Greece are well educated. All children between the ages of seven and twelve must attend school, and there are night schools in all of the cities. The school books have the same letters that the ancient Greeks used, and it is not uncommon to hear a boy of twelve recite the tales of Homer in the original, or repeat the speeches of



These schoolgirls of Athens are practicing gymnastics

Demosthenes uttered twenty-two centuries ago. The boys and girls are trained in athletics, and all take part in the sports of the stadium.

Athens has a girls' college and a university with thou-

sands of students. It has great museums and many scientific institutions. Scores of newspapers are published in the Greek text. Many of the people speak several languages, and we often meet boys and girls of ten or twelve years who address us in English. We learn that scholars from all parts of the world come here to study the antiquities, and at the American college in Athens we find students from our country studying Greek literature and art.

We are surprised at the extent of Greek commerce and trade. The ports are crowded with shipping, and Greek vessels are to be found in all the ports of the Mediterranean. The Greeks of to-day, like those of ancient times, are famous as sailors, and their merchant marine does much of the business of this part of the world. Their chief ports are Salonica and the Piræus, on the Ægean Sea, and Patras, on the western coast of Greece.

There are said to be more Greeks living outside the country than at home, many having gone abroad to engage in commerce and trade. They have banking houses and stores at all the ports of Asia Minor and Egypt, and also at the chief cities along the Black Sea.

But suppose we leave Athens and cross the peninsula to Corinth, and from there go on to Patras where we can get a vessel that will land us in Italy. We travel by automobile, stopping now and then to look at the country. How beautiful everything is! The sky is bright blue, the mountains have a roseate tinge, and the shadows of the fleecy clouds make dark velvety patches on the silver gray hills. We pass through fields of wheat, corn, barley, and oats, in which blood-red poppies are growing, and we stop now and then at an orange grove where the yellow balls peep at us out of the green foliage. There are also olive trees with the plum-like fruit ripening on them.

Nearly all the farming we see is of the rudest description. The fields are small, and most of them are hoed or spaded, instead of plowed. Nearly all of the seed is sown by hand; and in most cases the farmer owns the land he tills.

We stop on the way to look at the ship canal which has been cut through the Isthmus of Corinth to shorten the



Ship going through the Corinth Canal on its way to Athens

distance from the Ionian Sea to the Piræus. The canal saves over two hundred miles, although it is only four miles long, seventy feet wide, and twenty-six feet deep. As we wait we see a ship going through.

Leaving the canal we motor on to Patras, riding through

vineyards for miles. The vines have been cut back to the height of our knees and some of the old stumps are almost a foot thick. They put out new sprouts every year. The grapes are of a small seedless variety which is shipped to all parts of the world. These dried raisins are known as Zante (zăn'tě) currants; they form one of the chief exports of Greece, bringing in many millions of dollars a year. Shiploads of them go to the United States, and every one of us has probably eaten them again and again in puddings and cakes. They have such a delicious flavor that no other grapes are quite equal to them.

Just outside Corinth we see the people gathering the grapes, scores of men, women, and children picking them from the branches and laying them on trays to dry in the sun. After drying they are packed up and sent to Patras for shipment abroad.

Locate Greece on the map. Compare it in size with an American state; in surface with Russia.

Why is Greece sometimes called the "Cradle of our Civilization"? Tell a story of one of its ancient heroes. Who was Homer? Tell the story of Pegasus.

Mention some of the sports of ancient Greece. What foot race originated there?

Take a walk through modern Athens and tell what you see. What famous hill lies just outside of the city? What was the Parthenon?

Are the modern Greeks an educated people? Tell something about their schools.

What fruit do we import from Greece? For what is it used?

Where is the Corinth ship-canal? Compare it with the Manchester canal; the Kiel canal; the Panama Canal.

LVII. ITALY — GENERAL VIEW

SOUTHERN Europe has three great peninsulas which extend far out into the Mediterranean Sea. At the west is the Iberian Peninsula of Spain and Portugal, a great plateau of mountainous highlands whose southernmost point at Gibraltar is so near Africa that one can sail across within a few hours. At the east is the Balkan Peninsula, washed on the north by the Danube and on the east and south by the Black Sea and the Mediterranean, and between the two is Italy, the next scene of our travels.

Take your map of Europe and look at the Italian Peninsula. It is shaped like a great boot with its top in the Alps. The leg divides the Adriatic from the Mediterranean Sea and the foot is turned towards the island of Sicily.

Italy is larger than New Mexico. The boot is as long as the distance from Boston to Pittsburgh, and except at the top is on the average not much wider than from Philadelphia to Washington. The top has been made larger by the addition of the Trentino and other territories which Italy took from Austria during the World War, including the fine harbor of Trieste, formerly one of the chief ports of Austria-Hungary. Later the port of Fiume, in Yugoslavia, was transferred to Italy. Along the edges of the boot are other excellent harbors; and the whole coast is so densely populated that one sixth of all the Italians live within three miles of the sea and the homes of four fifths of them are not more than sixty miles away. Such a country is well fitted for commerce.

The peninsula is mountainous. The Alps wall it off from Switzerland at the north, and, beginning at the northwest and running through the whole length of the boot, are the Apennines, a long range of low mountains with passes through

is a long, narrow trough formed by the sinking of the land between the Alps and the Apennines, and filled up by earth washings brought down by the streams. More and more silt comes down every year, and the plain grows steadily larger. Within the past six centuries the delta of the Po has added to its surface an area equal to almost eight hundred farms of a quarter section each.

Italy has some of the most beautiful lakes of the world and thousands of American tourists go to see them every year. The largest are Garda, Maggiore (mäd-jō'rā) and Como, lying on the lower edge of the plain at the foot of the Alps. They form reservoirs for the rivers of the plain.

Italy lies in the same latitude as Ohio and Indiana, but its climate is more like that of Florida. The peninsula gets the hot winds from Africa and from the warm water of the Mediterranean Sea, while the cold winds from the north are shut off by the Alps. It is so mild at the foot of the Alps that many silk worms are fed on the leaves of the plantations of mulberry trees of that region, and in southern Italy and Sicily oranges and semi-tropical fruits grow as well as in southern California. There are almonds and pistachio nuts, and fine figs and dates.

On the plains of Lombardy, which is the chief farming section, the crops are much the same as in our northern states. They are corn, wheat, and oats. The valley of the Po is irrigated and has many rice fields. There are also extensive rice fields not far from Florence and Rome.

Farther south it is hot in midsummer. Grapes grow well everywhere, and also the mulberry trees which feed millions of silk worms. There are thousands of olive trees, and olive oil is produced in vast quantities.

About one seventh of the country is covered with forests, the most important tree being the chestnut, which is also

grown in plantations. The chestnuts, which are three times as big as ours, form an important food of the people.

The peninsula has no good coal and very little iron ore of value. Most of the fuel for its factories is imported from England, the United States, and other countries, but its mountains have many waterfalls, and electric power will in time take the place of much of the coal now imported. The most important mineral produced in Italy is sulphur. The island of Sicily for a long time was the chief source of the sulphur supply of the world, but in 1902 enormous beds of sulphur were found in Louisiana and Texas, several hundred feet below the surface of the earth, not far from the Gulf of Mexico. This sulphur has made us independent of Sicily, and we may yet compete with her in the markets of Europe and elsewhere.



LVI. VENICE

WE take ship at Patras and sail northward along the coast of Greece through the Mediterranean Sea. The sky is blue, and the sun has dusted the gray sides of the mountains with silver. We sail in and out among the Ionian Islands and are soon going through the Strait of Otranto into the Adriatic. We sail on this long, narrow sea for two days, coasting Albania and Yugoslavia, and on the third morning find ourselves at anchor in a great city that seems to rise out of the waves. The water fills the streets and washes the walls of the houses. There is water to the right and water to the left, and by climbing up the mast of our steamer we can look over and see water all about and beyond the city, which seems to be floating.

And still the shore is but a few miles away. We can see the marshes on the water's edge and green fields at the back,



Our route through Italy

and way off in the distance a wall of high mountains, their peaks covered with snow. Those mountains are the Italian Alps. Austria lies on the other side of them, and the country off which we are lying, extending hundreds of miles to



A side canal in Venice

the westward and southward, is the kingdom of Italy, which we are about to explore.

This city where we are anchored is Venice at the head of the Adriatic Sea. It has been called the Queen of the Adriatic, and in times past was a rich port, although now only small steamers can come into it. The foundations of Venice rest upon about one hundred little islands which have been so covered with houses that the town seems to float. The streets are canals and the islands have bridges connecting them.

Our steamer is in one of the widest of these waterways. It is the Grand Canal, an avenue of water filled with barges, launches, and all sorts of queer little boats moving to and fro. All of the traffic is carried on by boats. There is not

an automobile, a cart, or a wheeled vehicle in the whole city. There is not a cow or a horse, and the little donkeys, of which we saw so many in Greece, are not to be seen. The hucksters and vegetable peddlers row from door to door in boats, and stop now and then under the kitchen windows to cry their wares. The cargoes from the steamers are taken to the factories and warehouses in barges. The people go calling in boats. Some of the boats are run with little engines like those of a motor boat.

The houses rise straight up from the canals, so that one can step out of his door into the boat. There are no front yards, back yards, or side yards in Venice, and a child here never swings on his father's front gate. The streets are usually back of the houses. There are narrow stone pavements along the canals, but they are for foot passengers only. The canals wind in and out, and the bridges are so arched that boats can pass under them.

But see those odd-looking boats coming out to our steamer! They look a bit like an Indian canoe, but are turned up at the ends, and each has a little cabin in the center. They are painted black, and the only sign of color about them is the bright cushions inside the cabins. Those are gondolas, the water-cabs of Venice. We shall hire some of them for our trips through the city. At the stern of each boat stands the gondolier; or there may be one at the front and one at the back. The men scull the boats along by twisting their oars from side to side, swaying to and fro as they do so.

We beckon to one of the gondoliers to come to the ship and give us a ride through the city. He sculls his boat to the gangway, and we step inside the cabin. He then takes his place at the stern, and we soon hear the splash, splash, splash of his oar as we float along through one street after

the other. We go up the Grand Canal, among craft large and small, by factories humming with machinery, past palaces which have been turned into hotels and warehouses, and on by the homes of the people where families are sitting out on their balconies over the water, chatting and enjoying the air.

We direct the gondolier to turn into the smaller canals, and are soon floating through alleys so narrow that we can touch the stone walls on each side. The high houses shut out the sun, and the water seems black in the shadows, while our walled road is roofed with a strip of blue sky.

Now see the strange things which are going on in this canal! There are men and boys in swimming suits diving into the water and floating about. The canals are the playgrounds of the children. Every boy in Venice knows how to swim, and the little ones take to the water like ducks. See that boy diving out of the side window of his house! He has signaled to a boy in the canal and his play-fellow is crawling up through the water to meet him. There are women washing clothes on the steps of the houses, and they are hanging them out to dry on ropes stretched from one house to another across the canals. Farther on there are some small children in boats, and beyond them are passenger boats which act as ferries from one part of the city to the other.

Leaving this small canal we come again into the Grand Canal, our gondola rocking up and down in the waves made by the larger craft passing us. We stop for a moment at the Rialto (rē-äl'tō), a marble bridge which crosses the Grand Canal uniting two islands. This bridge is mentioned by Shakespeare in his "Merchant of Venice." It is more than three hundred years old, but it still swarms with foot passengers from daylight to dark. It is so wide that

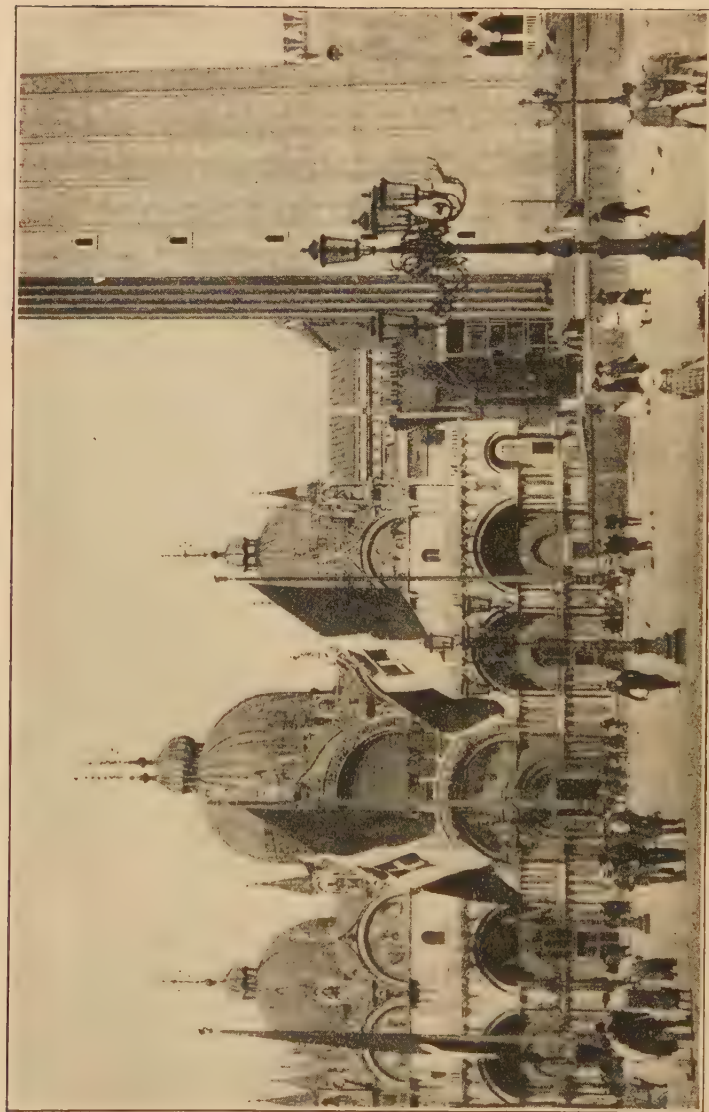
stores have been built upon it, and in them people are shopping.

Our hotel is one of the old palaces. It has marble steps, and we walk up them into wide halls floored with mosaic. Our bedroom has a stone floor, and its walls and ceilings are



The Rialto Bridge across the Grand Canal

covered with paintings. The houses of Venice are all made of stone which was brought here in ships from the mainland. In many instances cedar piles were first driven down into the sand and upon them these stone structures were built. Venice has sixteen thousand buildings resting on piles.



St. Mark's Church and the base of the Campanile

Venice is celebrated for its fine stone work. The people make of mosaic not only floors, ceilings, and walls, but also beautiful pictures, one of which may contain thousands of bits of colored stone and glass, so fitted together that the joints can hardly be seen, and the colors seem to have been put on with a brush.

We spend several days studying the industries of the city. We visit the glass works on the island of Murano (mōō-rä'-nō), the lace factories on the island of Burano, and other places where they are making brocades, tapestries, bronzes, and jewelry. We also see large establishments manufacturing heavy machinery, cotton, and woolen goods, and at the shipyards watch them building steamers for the Mediterranean trade.

At night we often visit the square of St. Mark's where the band plays, and at two o'clock every day go there to feed the pigeons that come down by the hundreds and perch on our shoulders and eat out of our hands. This feeding the pigeons comes from a tradition that Venice was once saved from its enemies by a letter brought by a carrier pigeon, and that at another time it gained a great victory by information obtained in that way.

St. Mark's is noted for its famous cathedral, and for the four bronze horses which stand high up on its front. When I said there were no horses in Venice, I meant really flesh and blood horses. The horses of St. Mark's are of metal, and have traveled more than any live horses we know. They are supposed to have adorned one of the triumphal arches of Nero at Rome. The Romans took them to Constantinople when that city became the capital of the Roman Empire. Later, when Venice conquered Constantinople she brought the horses back here. When Napoleon overran Italy, he carried them to Paris. There they remained until

he lost his empire, when they were again brought back to Venice. During the World War with Germany, it was feared that they might be again lost and preparations were made to take them to another part of Italy until after the war. At the same time sand bags were piled up about the other famous monuments, and high up covering the front of St. Mark's Cathedral. Owing to these defenses, little damage was done, although the city was bombarded by Austrian airplanes again and again, and on one day three hundred bombs were thrown down from the clouds.

The history of Venice is interesting. It was founded by the Veneti, who lived near the coast on the mainland, when the Goths under Alaric came over the Alps and took Rome. They attacked the Veneti, who fled for refuge to these sandy islands and here built their homes. For a time they lived by catching fish, and later they made salt from the sea, and carried their fish and salt to other parts of Italy for sale. As they grew richer they began to trade in other things. They sent out merchant vessels, and Venice became one of the chief commercial cities of the world. The port was not far from the low passes of the Alps, and goods were brought here from all parts of the Mediterranean to be carried over the mountains to northern and central Europe. Goods of various kinds were sent back in exchange, and thus Venice became a great trading center. Factories were established, and as the Venetians were artistic and skillful their city became noted in commerce and trade. The city grew more and more powerful, and in the fourteenth century was an independent republic with its own army and navy. Its merchants were among the richest of that time, and owned nearly three thousand vessels which carried their goods to all parts of the known world.

That was at the time of the Crusades, when all Europe was anxious to take Jerusalem out of the hands of the Mohammedans, and armies of soldiers were sent to Palestine to redeem the Holy City. One of the best ways thither was through Venice, so that for many years a stream of soldiers poured through the port, thereby adding to its wealth.

Venice continued to grow until the route to India around the Cape of Good Hope was discovered. It was then found that goods from Asia could be brought to Europe more cheaply that way, and the trade of this port began to decline. Then the discovery of the new world by Columbus brought the Atlantic ports into prominence, and that was another blow to the prosperity of the city. There are now several cities on the Mediterranean that have more commerce than Venice, and scores of ports in the world which are richer and more powerful. Venice now has less than two hundred thousand inhabitants and Italy has a half dozen cities which surpass it in size. A railroad has been built from the mainland out to the islands, and some goods from Asia now come by way of the Suez Canal to Venice and are sent over this railroad through the tunnels in the Alps to northern and central Europe.

Venice now lives largely on its income from tourists, who flock from all parts of the world to see its famous Campanile or bell tower, its magnificent churches, and the paintings in its palaces and art galleries. They are its most precious and profitable possessions. During the World War Venice was at times in danger of capture by the Austrians, and the people feared the loss of these works of art, but the tide of battle turned, the Austrians were driven back, and they eventually lost much of their territory adjoining north Italy.

LIX. NORTHERN ITALY

WE have left Venice and are riding on the railroad through the rich plains of Lombardy. On the north we can see the lofty, snow-capped walls of the Alps, and not far to the southward are the Apennines which run down the leg of the Italian boot. We have stopped at



Italian children

Verona where Shakespeare laid the scenes of "Romeo and Juliet," and also at Padua where Petruchio stormed against the unruly Kate in the "Taming of the Shrew." We have visited some of the towns along the Po River, and are now on our way to Milan (mīl'an) and Genoa (jĕn'ô-a).

The plain of Lombardy is the chief agricultural and industrial part of Italy. It has some of the richest soil of all Europe, so rich that it produces two crops of grain in one year, and, where the land is irrigated, even ten crops of alfalfa. The plain is about twice as large as Massachusetts and about one half of it is composed of irrigated lands.

We ride for hours through fields of rice, wheat, and corn, now and then passing orchards of mulberry trees, the leaves of which are used to feed the silk worms, and also fruit trees and vineyards. There at the right of the track the men are cutting the grass; they use scythes, and the women and boys are turning it over with long poles. Others are raking the dry hay together. There are few mowing machines. Most of the fields are spaded and hoed, and much of the plowing is done with old-fashioned wooden plows tipped with iron.

The chief business of Italy is farming and fruit growing. More than nine tenths of the country produces crops or is devoted to pastures and forests. More than six million acres are under irrigation, and there are eleven million acres of vineyards. There are rich valleys on both sides of the Apennines, and the pastures support millions of cattle, donkeys, sheep, and goats. There are orchards of olives, oranges, and lemons in almost all parts of the peninsula. Italy and Spain produce more olive oil than any other parts of the world.

Much of the land is owned in large tracts and let out on shares. In some districts the people who live in the mountains come down in bands to work in the harvest fields. Each band has its own leader, who tells the others what they shall do. The wages are much lower than ours, the boys and girls getting only a few cents a day.

But suppose we leave the train and visit one of the farm villages. The houses are of rough stone and mortar, which in some cases is covered with plaster. The smaller houses have but two rooms, a kitchen on the ground floor and a bedroom above. The floor is usually of brick or stone, and everything is of the rudest description, the furniture of many of the houses consisting of only a bench, two or three chairs and a table. In the poorest of the homes, the children sleep on the floor, and the grown people on sacks of straw in the room overhead.

That brick ledge at the side of the room is the cook stove. The basin-like holes in its top are for charcoal, and the draft comes in through holes in the side. They are not unlike the stoves we saw in Greece. The baking is often done in an oven outside the house, and some families take their bread to the public bakers as we saw them doing in Athens.

The Italian peasants live plainly; their food is chiefly bread and a cornmeal mush called *polenta*, with coarse macaroni and now and then meat and fish. The first meal is very light, the farmer sometimes going out to work after eating only a piece of dry bread. At eight o'clock he stops for another light meal, and at eleven comes home for his breakfast. This may consist of some vegetable soup, cornmeal mush, and perhaps macaroni. At night he has a dinner which is somewhat more generous, but as a rule he has meat very seldom. He eats plenty of onions, garlic, and lettuce, with olive oil as a dressing, and now and then has a fowl. In some parts of Italy the people eat quantities of chestnuts, grinding them to a meal, and mixing them with wheat flour for their bread. The nuts are not so sweet as our chestnuts, but they are bigger than horse chestnuts and make an excellent food.

The farmhouses we have described are among the poorest



Sorting cocoons in a warehouse



A room in a silk mill

of Italy. There are many much better where each family has several rooms, and houses still larger owned by the well-to-do peasants. There are huge stone castles and marble palaces belonging to the nobility, and in the cities many fine buildings and also tenements, where the people are crowded closely together, each family living in one, two, or three rooms.

How would you like to raise silk worms? Hundreds of thousands of Italians are engaged in this business, and many of the workers are boys and girls. Italy has the first place in Europe as a raw silk producer, and is second only to China and Japan in the world. She makes four fifths of all the raw silk spun in Europe, and in some years her crop of silk cocoons amounts to tens of millions of pounds. The silk is produced chiefly in the northern and middle parts of the peninsula, where there are large plantations of mulberry trees which furnish leaves to feed the silk worms. The United States imports a great deal of raw silk from Italy, but more from Japan and China. We are among the chief silk manufacturers of the world.

As we go on with our journey we pass through many groves of mulberry trees. The trees are not large, and we see children of our own age and younger gathering the leaves and spreading them out on the trays where the silk worms are. The worms bite off bits of the leaves and eat them. In some places thousands are feeding at once, and we can hear the chopping of their little jaws as they cut up the green leaves. They are fed four or five times a day, and they eat most at night. They keep this up for eight or ten days, during which they grow very rapidly. After that they sleep for forty-eight hours, then eat for a few days, and go to sleep again, and they do this four times before they become caterpillars. The silk worms

are full grown when they are about a month old. The caterpillars are about as big around as one's little finger and almost two inches long.

The caterpillar is now ready to spin its cocoon, and it does this by spitting a gummy liquid out of its mouth which sticks to the straws upon which it is laid for the purpose. It then doubles itself up, sways its head to and fro, drawing a fine silk thread from its mouth and spinning it about its body until after a time it is covered with silk, and at the end of three days it has made a silk home for itself. This is the cocoon. It looks like a white or cream-colored peanut covered with fuzz, and the length of thread in it is almost two miles. The worm now goes to sleep, and if left alone will turn into a butterfly and eat its way out.

The people, however, boil the cocoons to kill the worms inside, and then unwind the silk. They double the thread again and again, twisting it together to make it thicker, and it is from this thick thread that silk cloth is woven.

Silk culture is carried on all over Italy, and in one year sixty-five million pounds of cocoons are raised. More than two thousand factories are devoted to the spinning and weaving of silk, and two hundred to raising silk worm eggs.

You may remember that we have already heard how the silk weavers were brought from Italy to teach the weavers of France. That was during the Middle Ages. To-day the best silks of Europe are made in France, and millions of pounds of Italian cocoons are shipped there every year.

We see many people reeling silk as we go along under the slope of the Alps, and we find quantities of beautiful silk goods for sale in the stores of Turin, Genoa, and Milan. The girls of our party buy ribbons and bright colored sashes, and the boys pick out caps of knitted silk to take home.

LX. MILAN AND GENOA

CROSSING the plain of Lombardy we come to Milan, the chief city of the plain. It is almost as large as Boston and vies with Naples and Rome as one of the three largest cities of Italy. The town lies in a rich farming district within easy access of the port of Genoa, and has railroad connection with Switzerland and other parts of northern Europe by tunnels through the Alps. It is a railway center and has a belt line which runs around the city outside the old walls. We spend some time driving through the wide streets and visiting the public gardens and beautiful parks. We go to the many factories on the edge of the city, spend a while in the silk mills, and watch them weaving and dyeing cotton, the raw materials of which came from our southern states. We go to the grand canal which forms one of the connections of the city with Lake Maggiore and learn that the town has also a canal connecting it with the Po River.

We spend some time in the business part of the city, where we shop in the glass covered arcades in the Corso Vittorio Emanuele, where there are so many fine goods that they make us think of a world exposition. Milan is noted for its wealth and the people are proud of its magnificent buildings. They urge us by all means to visit their cathedral, which is famous all over the world. It is made of the purest white marble, beautifully carved, and has so many statues upon it that we attempt to count them, but after having figured out several thousand we give up in despair.

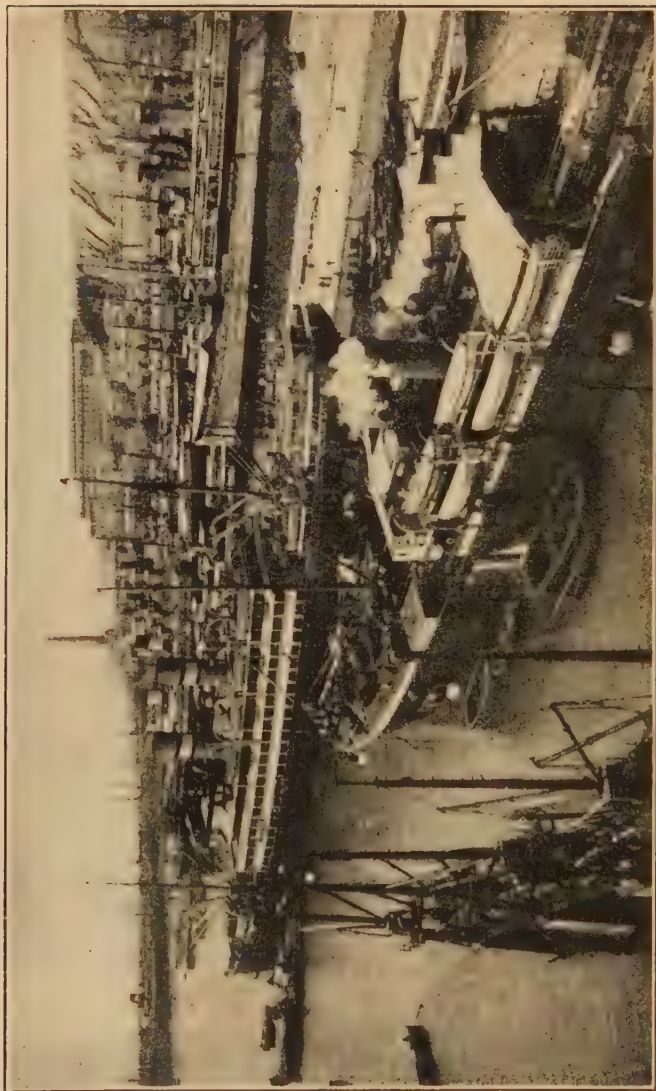
Leaving Milan we take a train for Genoa, where we see a monument of Columbus in front of the railway station.

It makes us think of a somewhat similar monument of the discoverer of America which stands in front of the railway terminal in Washington.



Arcade in the Corso Vittorio Emanuele, Milan

Columbus was born in Genoa in 1436. He was the son of a weaver, but he began life as a sailor. He was fourteen



The harbor of Genoa, with its shipping, warehouses, and lighthouse

years old when he made his first voyage and fifty-six years old when he discovered America. He had learned something of geography while at school and was an expert in making maps and globes. After a number of voyages he asked Genoa to equip an expedition in order that he might discover a new route to India by sailing westward. He was refused and then went to Portugal and England and asked those countries to help him. They would not do so, but after a long time he persuaded Queen Isabella of Spain to give him three small ships and with these he started out and found the new world. John Cabot, who discovered North America, was born in Genoa.

In the time of Columbus, Genoa was a rival of Venice and its people had factories and business houses in Constantinople, Asia Minor, and along the Black Sea. To-day it is much more important than Venice. It is one of the chief ports of the Mediterranean Sea, and has regular lines of steamers to New York and other American ports, and many which trade with Europe, South America, and other countries. We see ships in the harbor discharging coal, cotton, and other raw materials to be used in the factories, and several vessels which are taking on cargoes of rice, silk, cheese, olive oil, and manufactures for shipment abroad.

The harbor of Genoa is beautiful. It covers six hundred acres and the city rises on the hills which surround it, like the seats of an amphitheater. The houses cover the hills and in going about we seem always to be climbing up hill or down. Among the buildings are splendid marble palaces which were erected centuries ago, but are now used as apartments. In many of these palaces the two lower floors are given up to stores and offices, while the people live on the floors higher up.

Genoa has many factories in which silks and velvets are made, and also woolen mills, cotton mills, and works where they turn out beautiful things in ivory, gold, and silver. It is a ship-building center, and during the World War many gunboats and destroyers were constructed here.

The Italians fought very bravely during that war, and many stories are told of their daring deeds. One of the most remarkable was that of several Italian sailor boys, who blew up a great Austrian battleship in the harbor of Trieste. These boys had a torpedo which they could make travel slowly through the water. One night, having set its machinery when they were out of sight and some miles away from Trieste, they got astride the torpedo and traveled on it in the darkness right up to the sides of the great man-of-war. Here they anchored the torpedo, and having fixed the time clock they swam away into the darkness. They were only a short distance off when the explosion occurred, and the great battleship sank to the bottom.

Leaving Genoa we go by rail to Pisa (pē'sä) to see the wonderful leaning tower of marble which was built several hundred years before America was discovered. The tower leans so far over that we fear it may fall down upon us, but when we remember that it has been standing in this way for almost one thousand years, we muster up courage and climb the three hundred steps to its top for the view. It embraces the mountains, the city, and the sea, with the river Arno flowing below.

At Leghorn we watch them making hats and straw braid, much of which they ship to America, and at Florence we visit the great cathedral, the bell tower of Giotto (jôt'tō), and the picture galleries, which are among the finest in the world. We stroll along the river Arno, which flows through the city, and take excursions into the plains of

Tuscany, motoring through vineyards and groves of olives, oranges, and lemons. The scenery is beautiful, and we regret we cannot spend months exploring the country.



LXI. ROME

IF you will take your map of Italy and run your eye half way along the west coast to a point where a little river flows out of the Apennines into the Mediterranean Sea, you may find where we begin our travels to-day. We are within a few miles of the mouth of that river in a city which covers seven hills, running north and south into the wide plain which here lines the coast. The little river is the Tiber, the plain is the Campagna (käm-pän'yä), and the seven hills for more than twenty-five hundred years have been the site of one of the great cities of the world, the city of Rome.

When Rome was first settled, the Tiber was deeper than now and sea-going vessels came right up to the hills. Roads were built north and south over the plain, and there were easy passes over the mountains and to the valleys and other parts of the country, so that the place was well fitted for trading.

The town being on the hills could be easily defended, and the country about it was soon turned into pastures and farms. Moreover, the race which formed the first settlement was a strong one, and as time went on, the Romans conquered the rest of the Italian Peninsula and made war upon nation after nation outside, until they became the masters of all the known world.



Airplane view of St. Peter's Church and the Vatican

At that time almost all of the civilized nations lived about the Mediterranean Sea, and Italy, with its central position in that sea, was well fitted to be the governing country of the great Roman Empire. We have already seen how well the country is situated for commerce and trade. The Romans had a talent for conquest, government, and colonization. They cultivated their empire largely by the slaves they took in war, and as time went on, grew richer and richer. Their capital city became not only the richest and most beautiful of all the cities of the world, but also the center of learning and art. The ancient Romans wrote books which are now studied in our colleges, and their custom, language, and laws form a part of our civilization.

In time the Roman Empire was broken to pieces by the Goths, who overran Italy in much the same way that the Germans not long ago attempted to overrun Europe. They destroyed a great part of old Rome, and its ruins are still to be seen throughout the city. Centuries later, Rome came under the control of the Pope, the head of the Catholic Church, and under that Church was founded another civilization, which controlled Europe for hundreds of years. During its rule great cathedrals were built, colleges established, and some of the finest paintings of the world were made. We shall see evidences of all these as we go through the city. At the same time we shall behold the Rome of to-day, the capital of modern Italy, and the seat of the king, the premier, and the parliament.

Our first journey is to get a bird's-eye view of the city. For this purpose we shall go to the top of the Pincian Hill. Our way thither is up winding roads, shaded with cypress trees and lined with gardens of beautiful flowers. We go in carriages, enjoying the views, and at the end of our drive



Ruins of the Roman Forum

find ourselves on a terrace high above Rome. We are in the northern part of the city. We can see the buildings covering the hills to the southward and filling the valley of the stone-walled Tiber which winds about not far below.

The square at our feet with the obelisk in its center is the Piazza del Popolo (pyä'zä dël pō'pō-lō), and the long straight street that divides the city almost in half is the Corso, the chief business avenue of the Rome of to-day. Turning to the right we see the remains of a wall winding its irregular way about the town, embracing many ruins, some of which rise out of gardens and vineyards. That is the wall of old Rome. It was fourteen miles in circumference but it incloses only a part of the Rome of to-day.

The ruins are interesting. The vast amphitheater in front of us with its walls half gone is all that is left of the Colosseum, where lions, tigers, and other wild beasts once fought together, where naked gladiators tried to kill one another with swords and spears, and where Christian women and children were thrown to wild beasts to give the heathen Romans a holiday show. A little to the left of the Colosseum is the Forum, the common meeting place when the city was a republic, and where the most famous of the old Roman orators spoke. It now looks more like an excavation for some large building than anything else. The Rome of ancient times was many feet below the Rome of the present. The Forum has been dug out and is now a huge pit in the heart of the modern city, filled with broken columns and blocks of marble.

But what is that great building high over the Forum? It is the capitol where the senate of Italy meets, and near it is the Capitoline Museum containing some of the finest statues that have come down from the past. Everywhere we turn there are buildings famous in history, and the ruins are so many that it will be impossible for us to visit them all. Rome has scores of museums and picture galleries. It has great libraries and priceless collections of manuscripts. It is celebrated for its art and its architec-

ture of different ages, as well as being the capital of the kingdom of Italy.

Leaving the Pincian Hill we drive about trying to realize that we are in a town twenty-five hundred years old. Among the ancient palaces and the monuments are many fine modern buildings, often surrounded by splendid stores filled with the fashionable goods of to-day. Motor cars ply back and forth on the edge of the Forum. We can ride anywhere in electric street cars, and we find the telegraph and telephone everywhere ready to carry our messages. We stop at the fountain in the People's Square to get a drink from the mouths of the lions and take a photograph of the obelisk brought here from the valley of the Nile.

We are delighted with the Corso. The street is crowded with people, many of whom look like those we have seen in Paris and London. There are also peasants in caps and short jackets, and rosy-cheeked girls from the country in short skirts and bright-colored handkerchiefs tied around their heads. We see peddlers going about with their wares on their heads, and boys driving donkeys and mules loaded with fruit. There are priests and monks everywhere, walking along singly and in pairs, or in processions from one part of the town to another. They wear long gowns, some white, some black, and some brown; many have on high hats with broad brims, and others wear cowls or the hoods attached to their gowns. We meet also processions of nuns and sisters of charity, for Rome is still the chief city of the Catholic Church. It has three hundred charitable organizations, many of which are hospitals and asylums.

We go also to the Square of the Quirinal to see the palace of the king and there spend some time in parliament watching the Italians make their own laws. Italy is a constitutional monarchy, which means that the people largely

govern themselves. The nation holds a very important place in the live, working world of to-day, and is closely associated with us in commerce and trade. It was one of the chief fighting powers in the World War with the Germans. The Italy of to-day includes the great islands of Sicily and Sardinia, and also has extensive colonies and dependencies in Africa. Eritrea, along the Red Sea, is as large as Pennsylvania, and Italian Somaliland, farther south, is almost twice as large as Missouri; Libia, on the north coast of Africa, is almost four times the size of the Italian peninsula. These dependencies are largely desert.

The City of the Vatican, bordered on all sides by Rome, is a small independent state belonging to the See and Church of Rome. We visit the Church of St. Peter and feel lost as we go through it. It is twice as large as St. Paul's in London and is by far the largest church in the world. It covers more than five acres of ground. We then go to the Vatican, where the Pope lives. He has a magnificent palace which has an area of thirteen acres and more than one thousand rooms. In the Vatican are noted galleries of painting and sculpture. It contains a library of more than one hundred thousand volumes, including some of the most valuable manuscripts ever written.



LXII. NAPLES

“SEE Naples and die.” So say the Italians, for then you will have seen the most beautiful city of the world. Indeed, Naples is beautiful. As it rises, tier above tier, from the bay, with its gorgeous sky overhead,



Looking from Naples across the bay to Mount Vesuvius

it seems a city of palaces. There are blue mountains behind it, and to the south is the brown volcano of Vesuvius, sending masses of white vapor into the sky.

It has taken us four hours to come here from Rome. The way was through rich farms and vineyards and orchards of oranges and lemons. A part of the time we were in the hills, and out of them we shot down to this beautiful bay.

We have now left the station and are climbing the hills. The city is uneven, and we seem to be always going up or down grade. The buildings are high, and some of the streets are so narrow that they shut out the sun. Many of the people live in apartments, and in the poorer quarters whole families dwell in one room.

The climate of Naples is so mild that the people spend much of their time on the streets. We see them even making their toilets out on the pavements. Here a woman is washing her baby right out in the street, and over here a girl is combing her hair as she sits on a balcony. Near the woman a cobbler is soling a pair of old shoes, and on the opposite sidewalk a tailor is working.

How many children there are everywhere! Babies are crawling on the edge of the gutters, and games of all sorts are played on the sidewalks. Here comes a boy of ten leading a donkey and there is another with a can in his hand driving a flock of milk goats from door to door. He is one of the milkmen of the city and is helping his father whom we see milking a goat farther on. Behind him comes a donkey with a basket of fruit on each side of his back. One of the baskets is filled with oranges, fresh from the tree, and we buy a half dozen at two cents apiece. The rosy-faced peddler, who is about our own age, laughs as he gives them to us. His donkey is not bigger than a New-

foundland dog, and its ears are almost as long as its legs. Many of the boys of Naples have their own donkeys. They take the place of our ponies.

As we go on we meet peddlers of every description. There are men selling roasted chestnuts and pistachio nuts



A flock of milk goats in Naples

in almost every block. We can buy delicious grapes for one cent a bunch, and pears and peaches for ten cents a dozen.

In certain parts of Naples there are restaurants right out on the street. Here is a cook stand, which sells sausage and macaroni hot from the coals. Italian macaroni is famous. It is made from a hard wheat, which is grown in the country, and quantities of it are exported to the

United States. See, there is a man eating some now! He puts his fork in the dish and lifts up a mass and drops it into his mouth. He does not cut it but sucks in the long worm-like strings until the whole has gone down his throat.

Suppose we visit one of the factories and learn how macaroni is made. It is manufactured in different sizes, sometimes in pipes as big around as your finger, and sometimes in strips no thicker than a knitting needle. Larger kinds are called macaroni; the smaller are vermicelli and spaghetti.

We see the tubes of white dough drying on the racks in front of the factory, and going in find a score of men and boys hard at work. Each boy is dusted with flour, and his face seems ghastly in contrast with his sparkling black eyes. He is in his bare feet and his sleeves are rolled up to his shoulders. The men are mixing the flour and kneading the dough by means of great bars which are hinged to the table. It is thoroughly worked, then they carry the dough to a cylinder containing many small holes so arranged that it can be pressed through it. It comes out in long pipes or sticks which the boys hang over the racks in the sun or in the hot drying rooms of the factory.

We leave the macaroni factory and stroll down to the bay. It is filled with shipping from all parts of the world, about ten thousand vessels going in and out every year. Naples is the second seaport of Italy, and its harbor is one of the finest of Europe. The city, as large as Baltimore, has a vast trade with all parts of the Mediterranean, with northern Europe, and with North and South America. We see ships from Great Britain, Belgium, and Germany unloading coal, iron, and steel, vessels from Russia and India discharging grain, and some from the United States discharging bales of cotton. There are French steamers



The cone of the crater of Vesuvius during an eruption

bringing in wines, wool, leather, and oils, and the same ships are taking on wines, fruits, nuts, paper, and hemp. Naples does also a great business in fish and in coral and sponges. Its fishing vessels go out not only to all parts of the Mediterranean Sea, but to the Atlantic and elsewhere.



LXIII. THE VOLCANO OF VESUVIUS — POMPEII

SOME of the most interesting sights about Naples are not in the city itself. One of these is the volcano of Vesuvius, which at times sends great volumes of dust and steam into the air, while streams of red-hot, molten lava flow down its sides. Another is the once famous city of Pompeii (pŏm-pā'yē), which was buried by an eruption of this volcano more than eighteen hundred years ago. To-day Vesuvius is comparatively quiet, and Pompeii has been so uncovered that we can study the buildings and life of the people in that far distant past.

Vesuvius is the only active volcano on the continent of Europe, although Mount Etna on the island of Sicily has frequent eruptions, and the volcano of Stromboli (strŏm'bŏ-lē), on another island near by, is always vomiting forth lava which runs down its sides into the sea. Vesuvius is perhaps the best known of all the volcanoes, and one of the easiest of all to explore.

It is early morning when we start out to climb the volcano. The first part of our journey is in an automobile with a Neapolitan chauffeur, whose car rattles as it flies over the roads paved with lava. We pass through villages of lava-built houses, go by vineyards and gardens

walled with blocks of lava, and finally reach the foothills of the mountain. We now have to move slowly; we go through volcanic sand, and finally enter a region which is all bare brown stone. This stone is lava. We see it everywhere, and in all sorts of shapes. Some of it seems to have been boiling and bubbling when the cold air changed it to stone, and some is in rivers that once flowed like fire but are now cold and dead. As we look up we see a column of steam hanging like a gigantic umbrella over the top of the mountain. That column comes from the crater of Vesuvius.

The mountain, Vesuvius, is perfectly bare. There is not a bit of grass anywhere to be seen. It is of lava, ashes, and volcanic sand. The road going up winds in and out, and we finally leave our cars, mount donkeys, and climb up to the observatory where instruments are kept to register the vibrations of the mighty volcano. We are now two thousand feet above the sea, with magnificent views of the Bay of Naples and the country about. How the earth rumbles! We could feel it shaking as we rode up here on our donkeys, and now by means of the instruments we can tell just how much motion is going on way down in the heart of this mountain of fire. We talk with the director of the observatory. He tells us that Vesuvius is always more or less active, but that there is no great danger at present.

He describes the first recorded eruption, showing us how, about eighteen hundred years ago, the volcano was covered with farms, its slopes being cultivated almost to the top. Vineyards and orchards then grew where the lava and ashes now are, and there were hot springs in the foothills where the rich Romans came for the baths and for sport. There were beautiful towns on the plains hard by, and among them

were Pompeii and Herculaneum, the two most fashionable resorts of Italy.

Pompeii contained about twenty-five thousand people. It was a fine residence city, and had beautiful homes, temples, and theaters. The rich were living there in fine style, giving parties and dinners, and driving about in their chariots with gay prancing horses; the poor were at work at their trades, the merchants were selling goods in their stores, the children were going to school, and all sorts of business was being carried on, just as in one of our great cities of to-day, when, without warning, this huge mountain burst forth, sending vast volumes of steam, ashes, molten rock, and mud high into the air.

The ashes were so many they darkened the sun and turned the day into night. They coated all southern Italy with white, and even at Rome, hundreds of miles northward, the sun could not be seen. The people thought that the end of the world had come, and that the age of night had set in. At the same time it rained mud, and rivers of molten lava boiled out of the crater, and flowed in great streams of fire down over the plains. The horses, sheep, and cattle pasturing in the fields were drowned, the vineyards and gardens were covered, and in the towns even the tallest buildings were soon buried. They all disappeared, and the region became a great plain of ashes and mud.

As time went on vegetation sprang up, new towns grew up on the plains, and crops of all kinds were raised there. The buried cities were forgotten. They were blotted from the memory of man, as the volcano had blotted them from the face of the earth.

And so it remained until about one hundred and seventy years ago when a peasant, who was sinking a well, struck his spade against a statue. He dug it out and found

bronze tools and other things under the earth. This caused other excavations to be made, and it was found that there was a city down there below the surface. The government of Italy then took possession, and its scholars began to unearth the city and to investigate its history. It was thus that the site of Pompeii was discovered.

That eruption occurred in the latter part of the century during which Christ was born, and for a long time thereafter the volcano lay quiet. During the eighteenth century there was another terrible outburst, when the whole top of the mountain was blown off, forming a huge pit three miles around and about half a mile deep. Since then other eruptions have caused streams of lava to flow out of the crater, until now Vesuvius is a mass of lava, cinders, sand, and ashes.

Leaving the observatory, we again mount our donkeys and struggle on our way up the volcano. At last we reach the station from which we are to ride to the crater by rail. The railroad is somewhat like one of our cable car lines. It has three rails, one in the center which supports the weight of the car, and others at each side for the guiding wheels which keep the car from jumping the track. The cable attached to the car runs through a wheel at the top of the mountain and is moved by an engine at the station below. The sides of the car are open, and we have magnificent views of the Mediterranean as we rise through the volcanic sand. We go rapidly upward, and at last stop near the crater more than four thousand feet above the sea. Here we hire guides, and pick our way over the thin coating of lava to the mouth of the volcano.

The air is now hot and loaded with brimstone. We cough and hold our handkerchiefs to our faces in a vain effort to keep out the sulphur fumes. The wind is blowing

the steam away from the crater, and we are able, by walking carefully over the crust, to look down into a vast pit walled with yellow sulphur. In the bottom is a lake of fire, which is seething and boiling, sending up steam, ashes, brimstone, and rocks. Now it is quiet, and now it bursts forth, throwing stones high into the air. They fall back, and we can hear them splash into the burning lake down in the crater.

But see, the wind is changing and the stones are falling almost at our feet! Our guides drag us back and hurry us away for fear we may be killed by the hot rocks.

This is only a gentle eruption. When the great outbursts occur, the noise is like that of a battle, and huge rocks and stones weighing many tons are shot upwards for hundreds of feet. About half a century ago, twenty sight-seers were killed where we now stand, pieces of rock being thrown a mile high. At such times the steam rises to a height of more than two miles, and the whole mountain is covered by an umbrella of ashes and cloud more than five miles in height.

How warm the earth is! We dare not stand still. We seem to be walking upon a hot stove; we smell our shoes burning; we bend down and touch the lava with our fingers, but draw them away quickly, scorched with the heat. One of the guides asks us to look at the cracks in the earth: and we see fiery streams of molten lava flowing through them under our feet. He thrusts an iron rod into one of the cracks, and brings out a lump of the red-hot lava. He asks us for a penny and presses it into the lump with a stick. He then drops the lava off the rod into a bucket of water which a boy has brought up. The water hisses and steams, but the lava soon cools and the guide takes it out. Our penny is now embedded in the lava like a raisin in a bun; we shall take it home as a relic.

We then ride on donkeys back to the cars, and drive over the plain to the site of the once buried city of Pompeii. There is a great wall about it made of the earth and stones which have been excavated; and we find many boys and



Ruins of a market place in Pompeii

men digging, and carrying the stuff out in baskets on their backs and their heads.

A large part of Pompeii has now been uncovered, and we walk through streets walled with the buildings which were covered up by Vesuvius eighteen hundred years ago. The earth and mud have so preserved the buildings that they look almost as they did at the time of the eruption. The roadways are paved with stone, and in some of them we can see the ruts made by the wheels of the chariots. We

walk through the amphitheater where the shows of the city were held, and sit down on the marble seats of the bath houses, where the boys of Pompeii sat when they had finished their baths centuries ago.

We wander about through the houses, peopling them with their old Roman owners. There are many buildings of brick and many of stone. They are nearly all of one or two stories, and some are quite large. All had wooden roofs which were burned off by the fire from the volcano. Some of the houses have walls covered with paintings, and in some beautiful statues in bronze and marble were found. They had fine paintings and all sorts of beautiful things in metal and carvings. The floors were formed of different colored stones, fitted together in mosaic pictures, and the Latin word "*Salve*" or "Welcome" was carved over their doors. In one entrance floor there was a mosaic picture of a fierce dog gnashing his teeth, and tugging at a rope as though he wished to get at you, while at his feet were the words "*Cave Canem*," or "Beware of the dog."

We are interested in the business sections. Pompeii had streets of shops with marble counters, where the merchants were selling their goods when the volcanic flood came. We peep into a public bake oven, in which black loaves of burnt bread were found when the mud and ashes were dug away, and we can imagine the people coming there to have their food cooked as we saw them doing in Athens. At Naples are seen casts of men, women, and children, and even dogs, made by pouring plaster of Paris into the holes which their bodies formed in the ashes that covered Pompeii, and in the Museum there are shown cooking utensils, toilet articles, rings, earrings, and bracelets, fishhooks, and knives, and thousands of other articles of every description. All were in common use among these people when, without

warning, they were destroyed by the ashes and boiling mud of this terrible mountain.

Locate Italy and make a sketch map, showing the places mentioned in the book. Compare the Italian Peninsula with the Iberian Peninsula; with the Scandinavian Peninsula; with the Balkan Peninsula.

What are the chief harbors of Italy? Describe them and name the principal exports and imports. What new harbors came to Italy through the World War? Trace a cargo of wheat from Odessa to Genoa; a shipment of olive oil from Naples to New York.

What advantages of position has Italy for world trade? For trade with northern Europe? With Africa? With Asia? With Russia? With western Europe? With South America and North America?

Name some of the dependencies of Italy. Show where they are located.

What mineral product comes from Sicily? How does it compare with a similar mineral found in the United States? (See Carpenter's "North America.")

Name six great cities of Italy, and tell for what each is noted. What city apparently floats upon the water? Of what Scandinavian capital does it remind you? Locate Milan. In what city were Christopher Columbus and John Cabot born? Tell the story of each of these men. Visit Rome and describe some of its ruins.

What proportion of Italy is cultivated? Take a trip through the plains of Lombardy, and tell what you see. Mention some of the chief crops. With what state of the United States does Italy compare in climate? In size? Bring some macaroni to class and tell how it is made.

What salad oil do we import from Italy? What other country of Europe produces much of this oil? How is it made? (See Carpenter's "How the World is Fed.")

Describe the silk industry. What other countries of the world raise silk? Which country produces most? What country leads in making silk goods? Tell the story of a silk worm. Follow a shipment of raw silk from Italy to New York; a shipment of olive oil from Naples to San Francisco, going all the way by water.

What is the government of Italy?

Make a visit to Naples and Vesuvius. Write the story of Pompeii.

LXIV. SPAIN

WE have left Naples, steamed northward past Rome and around the island of Corsica, where Napoleon was born, and come to anchor in the Bay of Barcelona, the chief port of the Iberian Peninsula. We have already explored the Balkan Peninsula and the Italian Peninsula, and we are now to travel over the third of the great peninsulas which comprise most of southern Europe.



The Iberian Peninsula, which is nearly twice the size of Italy, forms the southwestern end of the continent, comprising the countries of Spain and Portugal. It begins

at the Pyrenees, a great wall of steep mountains which runs in one unbroken mass from the Mediterranean Sea to the Bay of Biscay, separating the two countries of France and Spain, and it extends so far south at the Strait of Gibraltar that we could cross from there to Africa in a small boat in a very few hours. The peninsula is about as large as the states of Nevada and Arizona. It consists of a high, dry plateau crossed by ranges of snow-clad mountains with rich valleys and dreary plains lying among them. There are ranges of hills around the coast, few navigable rivers, and very few good harbors. All of the long rivers except the Ebro empty into the Atlantic, as the height of land is nearer the Mediterranean than the ocean. Most of the rivers are low for much of the year, and too shallow for shipping. Many of them run through deep ravines, so that they cannot be used for irrigation. The waterways, if joined together, would perhaps reach from New York to Chicago, but not more than one third of them have sufficient water the year around. The deepest river is the Guadalquivir, which is navigable for small ships as far as Seville.

The mountains which surround the plateau give Spain a continental climate. Its winters are cold, and in Madrid, although it is in about the same latitude as Naples, there is often ice and snow with skating and sleighing. The summers are exceedingly hot, and in the far south it is so warm that oranges and lemons, bananas, dates, and other tropical fruits can be grown.

In the north the crops are much the same as those of our central states. Wheat, barley, corn, rye, and oats are raised, and the sections farther south produce rice and sugar cane. There are large tracts of fertile soil, and great stretches of dry pasture lands. There are also forests of

evergreen oaks, and of the oak tree whose bark furnishes the corks of a large part of the world. The peninsula is one of vineyards and orchards. It grows as fine grapes as California, and produces more olives and olive oil than any other country of Europe.

With the exception perhaps of Russia, Spain is the chief treasure vault of Europe. She has more and richer deposits of minerals than any other part of the continent, and, until the discovery of America, she had produced more metals than any other country in the world. The richness of her minerals was known to the Phœnicians who were mining gold along the Guadalquivir (gô-dal-kwiv'er) River before the time of King Solomon, and later on, the silver for Carthage came from Spain. The Romans knew of the mines of Spain, and sent thousands of slaves, taken in war, to toil for silver, copper, and gold. Later on, the Goths, Vandals, and Moors conquered the country, but did little mining; and after the discovery of America the New World gave Spain so much gold that she neglected the wealth lying under her feet.

Now many of the old mines are being reopened, and Spain is producing large quantities of iron and copper ore, much of which is shipped to England and Germany to be smelted and used in manufactures. Nearly every province is found to contain coal, and there are quicksilver mines at Almaden (äl-mä-thân') in south-central Spain, which surpass those of any other country. Spain stands second to us as a producer of lead, and she is now taking about two hundred thousand tons of that metal out of the earth every year. For a long time she has been mining vast quantities of iron from the mountains along the Bay of Biscay, and other iron deposits have been discovered in different parts of the peninsula. She has gold mines, silver mines, zinc mines, and

sulphur mines, and platinum has been found within the past few years. At the present time more than two thousand mines of various kinds are being worked, and a vast number of men and women, and almost twenty thousand boys and girls under eighteen, are engaged in getting the ores out of the earth.

One of the valuable metals that comes from Spain is copper, and the Rio Tinto (rē'ōō tēn'tōō) mines, situated within a few miles of the port in southwestern Spain from which Columbus started out to discover America, are the most famous of the Old World. These mines began to be worked about two hundred years ago, and their product has sold for many millions of dollars. The deposits cover about eight square miles, and much of the ore is taken out as we take stone out of the quarries. The surface or overburden of earth is removed, and the copper-bearing rock is gotten out by digging and blasting. Tunnels have been driven into the hills, and in some places they go for seven hundred feet through nothing but ore. We have similar mines in Utah and others of our western states.

We are interested in Barcelona. It is larger than Marseilles and next to Madrid (ma-drīd') is the largest city of Spain and its chief business and manufacturing center. Barcelona was founded by the Phœnicians, and is one of the oldest cities in Europe. Nevertheless, it is now one of the most modern. It has electric lights, street cars, motor-trucks, and automobiles, and its business buildings and houses are as up-to-date as those of most cities of the United States. The old walls which surround the city have been converted into promenades and driveways, and there are large public parks.

We spend some time on the Rambla, where most of the theaters, hotels, and shops are situated, and go out to



Statue of Columbus overlooking the harbor of Barcelona

the bull-ring, which has seats for eight thousand spectators. We visit the old university founded sixty-two years before Columbus discovered America, and motor out to the suburbs to see the factories making cotton cloth from raw materials brought from our southern states, and silk from cocoons raised in Spain. Barcelona also manufactures paper, glass, leather, and chemicals, and has large woolen mills.

The harbor of Barcelona is one of the best on the Mediterranean Sea. It is about five hundred miles north of Gibraltar and regular steamers go that way to New York, Porto Rico, and the Philippine Islands, as well as other parts of the world. There are a number of vessels now here unloading goods from the United States, or taking on exports for our country. Some of the ships have thousands of bales of cotton from Galveston and New Orleans, and others are unloading grain and tobacco and various kinds of American machinery. The exports consist largely of wool, hides, and skins, and of olive oil and materials for fertilizers. They include also slabs of cork bark as it comes from the trees, and the cork stoppers for bottles, such as are used all over the world.



LXV. RURAL SPAIN

LEAVING Barcelona, we wind our way on the railroad up the hills and travel across the plateau. This land is different from any we have visited in Europe. It is high, dry, and largely almost a desert. To-day the sun is wonderfully bright, and the weather is hot. As we go through the mountains we pass forests of oak and other fine trees. Our train crawls along above mag-

nificent valleys with fields of wheat, corn, and oats spread out like a large crazy quilt far below us. Many of the trees are chestnuts and cork oaks. Now and then we see groves of oranges and lemons, and now ride along hills where for miles there is nothing but olives. On the semi-arid plains, vast flocks of sheep and goats are grazing, watched by men and boys assisted by dogs. The sheep are merinos, a Spanish breed which has been introduced into Australia, Argentina, and the United States.

As we go on we pass many small towns of stone or brick buildings covered with stucco. Their walls are painted in all the colors of the rainbow and most of them are roofed with red tiles. There are also numerous villages in which the farmers live, going out to their work in the fields; the boys often use donkeys to ride back and forth.

The roads are poor, and in the mountains everything is carried about on the backs of asses or mules. See that fat farmer with a hat almost as big as a parasol and the great cloak on his shoulders! He is as big as his donkey, and his legs almost touch the ground as he urges the little beast onward.

Farther down the road a donkey is carrying two boys, and beyond them is a drove of donkeys loaded with grain, each having a bag on its back. They have neither bridles nor saddles; they are driven along by a rosy-cheeked, barefooted boy in the rear. Behind comes a boy with a cart-load of grass; he is leading his donkey. We see donkeys laden with fruit, and some so covered with hay that their loads seem to be walking off on four legs. There are also mules carrying goods. The whole of this part of Spain seems to be going mule-back or donkey-back.

Now we have left the mountains and are out on the plains. See the huge ox-carts lumbering over the ruts of the

roads! Some of them are piled high with grain. The oxen are yoked to the tongue of the cart by bars fastened to their



A Spanish milk peddler riding his donkey to town

horns, so that they really push the loads along with their heads and not with their shoulders as our oxen do.

Notice the man plowing in that field over there! He is goading his oxen along with a stick at the end of which is a sharp point of steel. His plow is a piece of rough wood tipped with iron, and it merely scratches the soil. That is a sample of the old-time farm tools of the country.

More than half of the Spaniards are farmers. The land is divided into small holdings, and many millions get their living from the soil. They raise large quantities of wheat, barley, corn, and rye, but they could have far more if they had the modern farm tools we make in America. Agricultural machinery is used only on the large farms.

A great part of Spain is so dry that but little will grow upon it. Much of the plateau has less than twenty inches of rainfall per year, and many of the rivers are dry in mid-summer. Nevertheless, there are irrigated sections which yield very large crops. This is especially so in the wide belt along the Mediterranean coast where sugar cane, corn, and fruit are produced. In Valencia three or four crops are harvested annually, and rice is grown on the swampy lands there.

Italy, France, and Spain are the three chief grape-growing countries of Europe. Southern Spain has a climate much like that of California, where our greatest vineyards are. There we shall find several million acres of vineyards, and we may ride for miles along hills terraced with vines. The best soil for this fruit is bright red in color, and so rich that every bit of it is used. The vineyards are carefully tended, a little trench being dug about each vine to catch the rain when it falls. In some regions the vineyards and orchards are irrigated.

The big green or white grapes sold in our stores come from the port of Malaga on the southeastern edge of the plateau. They are packed in cork dust for export.

Other varieties are made into raisins, of which we buy millions of pounds every year.

The chief olive countries of the world are Italy and Spain, although we grow olives in California, and some are raised in parts of eastern Asia and northern Africa. Italy has the most trees, but Spain produces more olives and makes more olive oil. This fruit thrives upon lands where the rainfall is light. It requires a warm climate in summer, but will withstand severe freezing.

In traveling over the plateau, we see olive orchards everywhere, and in one place visit a farm where they are picking the fruit and pressing out the oil. The old Spaniard who owns the orchard welcomes us with a smile. He tells us the orchard is ours, and everything in his house and on his farm is at our disposal.

Olive trees look much like plum trees, save that they are knotty and gnarly, and their leaves are dark green dusted on one side with silver. The fruit has a pale green color, much like the olives sold in our stores. Such fruit is not yet ripe, but is ready to be pulled off and salted for curing. The ripe olives are of a dark glossy purple. They are used in making the oil. The men are shaking the trees and knocking the fruit off with clubs, while rosy cheeked, barefooted boys and girls are picking the olives from the ground into the bags and baskets, which are carried on the backs of donkeys and mules to the mill. We follow some of the loads and finally come to a rude trough cut into the top of a stone which lies flat. The olives are put into the trough in the flat stone, and a stone wheel crushes them to a pulp as it rolls over them. The crushed olives are then laid on straw mats, and placed one mat above another in a press where, by means of a long heavy beam used as a lever, the oil is squeezed out into a rude tank

below. Water is mixed with the pulp to make the oil flow the more easily, and the liquid coming out is composed of water and oil, but the oil rises to the top and is skimmed off. The pits are not crushed. The refuse pulp is kept for fattening hogs, and the oil is put in bottles for sale. Only the best of the oil is fit for the table, the poorer kinds being used for cooking.

Upon inquiry we learn that the olive orchards of Spain cover more than three million acres, and that they sometimes yield over two million tons of fruit in a year. The trees are carefully cultivated. They begin to bear at two years and continue to do so for such a long time that the people say: "If you would give a lasting fortune to your children's children, you have only to plant olive trees for them."

We are delighted with the country people of Spain. They are polite, and they wear such gay costumes that we find a new and brilliant picture wherever we look. Some of the men have bright-colored blankets about their shoulders and broad-brimmed hats with short conical tops. They wear short jackets and knee breeches, and often their legs below the knees are wrapped around with rags. Some have on sandals, and others queer-looking shoes.

The girls have caps with tassels so long that they hang down on their shoulders, and on Sunday they wear dresses of black velvet with striped shawls of bright colors. They have short skirts; some wear gaiters which come to their knees, while others have low shoes, their stockings being decorated with ribbons crossed over and over. We see many barefooted women with handkerchiefs on their heads working away, and in the far south are dark-faced peasant men wearing turbans. Spain has a large variety of strange costumes, nearly every province having a dress of its own.

The people of the cities dress much as we do, save that the men often wear cloaks, and in some districts wide white cotton drawers to the knees, looking almost like petticoats. They have sandals of hemp. They wear red velvet coats with a sash around the waist, while a handkerchief is often tied about the head. The women wear mantillas or veils instead of hats, and usually black gowns when out on the street.

The Spaniards are a fine-looking race, and their women are famous for their beauty. They have dark, rosy faces and dark hair and eyes, although now and then you may meet a beautiful blonde. The women age rapidly, however; the poor through hard work, and the rich through idleness.

We find the living at the hotels fairly good. When we rise in the morning we have the meal called *desayuno*. This is only a cup of chocolate or coffee with bread and butter. About noon we have another breakfast of eggs, fish, and soup, and at the end of the day a very good dinner. One of the most common dishes at dinner is *puchero*, a vegetable soup cooked with boiled beef or fowl. The soup is served first, and then the meat and vegetables which were cooked with it are brought on. Following this we often have fried meat and croquettes, and then perhaps fish and after the fish a dessert and fruit, ending our meal with cheese and black coffee.

From noon until two o'clock all business stops in order that every one may have time for the second breakfast and for a rest or a sleep after it. This custom seems lazy to us, but it is so warm here that it is not best to work in the heat of the day.

LXVI. THE CITIES OF SPAIN

THE chief cities of Spain, with the exception of Madrid, which is situated a half mile above the sea in the middle of the plateau, are along the seacoast, or in the river valleys of the high plains, where the water can be used for irrigation. We have already visited Barcelona, the main port on the Mediterranean Sea, which to-day is the chief landing place for American goods, and has regular steamship sailings to New York. One of the chief imports is raw cotton for the near-by factories.

An important seaport on the Bay of Biscay is Bilbao (bīl-bä'ô), near the rich iron and copper mines of north Spain. It was founded before the time of Columbus. It is the chief city of the Basque (bâsk) provinces, and the port from which most of the iron is shipped. The Basques live in the foothills of the Pyrenees. They have small farms and work in the mines. They are a people noted for their love of independence and industry.

Traveling south from Bilbao, a short trip takes us to Valladolid (väl-yä-thö-lēth'), where Cervantes, who wrote "Don Quixote," lived, and where Christopher Columbus spent his last years. We visit the house where he died. Valladolid is a busy railway and manufacturing center. It makes chocolate and flour, woolens and silks, as well as pottery and ironware from the raw materials mined not far away. The city is situated on one of the trunk lines to Madrid, and by a day's ride across the plateau we find ourselves in the capital of Spain.

Madrid is larger than Boston, but does not otherwise resemble the capital of New England. Boston is built upon curves, Madrid runs to straight lines and rectangles.



Plaza Mayor, looking toward the Royal Palace, Madrid

It is a square town, made up of immense square buildings, which inclose square courts. The buildings include the royal palace, the national library, a huge university, and the vast structures of the departments of the government.

The Paseo, the chief boulevard of Madrid, is one of the finest promenades of the world. It runs north and south the entire length of the city, being shaded by from four to six rows of trees, and ornamented by an obelisk and fountains and statues. Upon it is a statue of Queen Isabella on horseback.

The climate of Madrid is not always delightful. Some one has said that the city is an icehouse for three months of the winter, and a furnace for the rest of the time. The city gets the winds from the dreary plateau, and the dry plains reaching out on all sides have but little shade.

We stay a week in the city, and wonder if it has not been belied. It is now midsummer, but the heat is not that of a furnace. Indeed, we find it pleasantly cool, as we motor about mornings and evenings, following the Spanish custom of taking a siesta, or rest, in the middle of the day. We usually start out on our excursions from the Puerto del Sol, the great public square upon which our hotel faces. This is the business center of Madrid and one of the liveliest places in Europe. Around it are the principal stores, and it is the terminus of all the street railways.

We spend much of our time in the square, taking snapshots with our cameras and watching the sights. A dense traffic comes in and goes out in every direction. There are motor cars and carriages, driven by coachmen in livery and containing rich Spaniards. There are gayly dressed men upon horseback, and boys upon donkeys. There are motor trucks and ox carts, and mules carrying boxes and bales on their backs. Now and then we take a picture

of a regiment of soldiers marching to the music of a band, and now and then one of a band of schoolboys walking along in charge of a priest. Most of the Spaniards are Roman Catholics, and the priests are often the teachers.

We hear the newsboys shouting their papers, the peddlers crying lottery tickets, and see milkmen and mechanics of all trades moving along. In the evening the cafés on the square are filled with people eating, chatting, or playing dominoes, and the streets are thronged with men and women taking the air. The Spaniards of the cities keep late hours, and at midnight this part of Madrid is alive.

We spend some time visiting the museums and art galleries for which Madrid is noted. We go to the great university, which is one of the largest in Europe, and in the royal palace and government departments learn much about the country and how it is governed. Spain is a constitutional monarchy. It is ruled by the king and the Cortes, which consists of a Senate and a House much like our Congress. The senators are chosen partly from the nobility and certain officials, and partly by vote of the people. The members of the lower house are elected, all males over the age of twenty-five having the right to vote.

From Madrid we travel by rail from province to province and from city to city, finding that the people of different sections have their special industries, and ways and customs of their own. In Valencia, one of the chief ports south of Barcelona on the Mediterranean Sea, we see them shipping large quantities of oranges and raw silk from the cocoons raised in the country near by, and further south at Cartagena are great smelting works supplied by the copper, zinc, and iron mines near by. Valencia ranks next to Madrid and Barcelona among the cities of Spain. It has the largest bull ring in the kingdom, and is the site of one of the chief

universities. Its harbor is excellent, and it is a manufacturing center, making velvets and silks, plush hats and gloves, and most beautiful fans. Spanish fans are noted, and each girl of our party buys one to take home.

We are now in southern Spain, that part of the peninsula which for centuries was in the hands of the Moors. The people here are somewhat darker in complexion than those of the north, and many of them remind us of the Turks and Arabs. The buildings are different, and in the older cities we find houses like those of Constantinople. This region was taken by the Moors, who came across from north Africa and conquered the Spaniards. They made their way northward, until at one time it was a current saying among the French that Africa began at the Pyrenees.

The Moors were Mohammedans, who built mosques and founded great cities. For a time, some of the rulers of Spain were appointed by the Mohammedan caliphs of Damascus. Then the Franks, from whom it is said the French are descended, marched over the Pyrenees and assisted the Spaniards, and for a long time the Moors and the Christians, Spaniards and French, each held certain provinces. The Christians finally conquered, but there are still descendants of the Moors all over south Spain, and the large cities contain Moorish ruins.

During our travels we visit Cordoba, which under the Moors had almost a million inhabitants. The city was founded by the Phœnicians, and was famous under the Romans. The Moors founded a great university here, which had six hundred thousand volumes in its library, and the city had at one time, it is said, two hundred thousand houses and six hundred mosques.

We next visit Granada to see the Alhambra, one of the most famous palaces of the Moors, and then go to Seville,



The tower of Seville Cathedral reminds us of Madison Square tower in New York

where is the Alcazar, another Moorish ruin of remarkable beauty. Here we climb the tower of La Giralda, which is three hundred and thirty feet high, for the view. It belonged to an old Moorish mosque, but there is now a bronze statue of Faith, thirteen feet high, on its top, and this statue is so made that it moves in the wind like a weather-vane.

Seville is a thriving city to-day. The country about is famous for its tobacco, oranges, and other tropical fruits. It has one of the largest tobacco factories of Europe, in which six thousand women and girls are busy making cigars and cigarettes, and also factories for soap, corks, perfume, silks, and pianos. The city is situated on the Guadalquivir River about sixty miles from its mouth, and we can sail down this river to Cadiz on the Atlantic Ocean.

But first we wish to see the port from which Columbus started out when he crossed the Atlantic to find the New World. So we take the train for the little town of Palos (pä'lōs), situated not far from Seville. The town was important at that time, but is almost nothing to-day. Columbus came here from Granada, where he had finally made his arrangements with Queen Isabella for the voyage. As the story goes, the Queen had refused to risk her money in aiding Columbus, and the famous mariner had left in despair and started on muleback for France to try to induce the king of that country to aid him. He had ridden only six miles out of Granada when Queen Isabella was persuaded to send a fleet horse to bring him back to the city. It is said that she advanced for the voyage quite a large amount of money for that time, some of which was repaid later, and this sum, added to about one hundred thousand dollars given by Columbus and citizens of Palos, financed the discovery of the New World.

From Palos we go in a small vessel to Cadiz, which for

a long time was the chief European port for Spanish America after Columbus made his discovery, and thence take ship for Gibraltar.



LXVII. GIBRALTAR

WE land from our ship this morning in the face of one thousand cannon. We are at the foot of the great Rock of Gibraltar, belonging to Great Britain. The huge gray marble rock which rises above us is less than two



The Rock of Gibraltar rises almost fourteen hundred feet above the Strait

square miles in area, and its height is almost three times that of the Washington Monument. It is about three miles in length, and only about three quarters of a mile wide ;

but nevertheless it is the key to the Mediterranean Sea and one of the most important fortifications of the whole world. The great rock stands just inside the only water-gate from the Atlantic Ocean. It commands the Strait of Gibraltar, a deep channel forty miles long and from nine to thirteen miles wide. Just opposite Gibraltar it is only about twelve miles in width and the big guns of the forts there can send projectiles twice as far as across the Strait, and they can easily destroy any vessel on its way through. The fortifications guard the entrance not only to the Mediterranean Sea, but through it to the Suez Canal and the Indian Ocean.

The depth of the Strait is one thousand feet for a width of five miles through the center so that the biggest steamers can easily pass. It is so narrow that plans have been proposed to make a tunnel under it from Europe to Africa, so that the continents may be connected by railway. Such a tunnel need not be much longer than some of those through the Alps from Switzerland to Italy, and it would be shorter than a railway tunnel proposed to connect England and France under the Straits of Dover. Should this tunnel be completed it may some day be possible to take train at Glasgow and go southward clear across Europe and Africa and to Cape Town by railway. In such a trip one would probably go east from Tangier, Morocco, to Egypt by roads yet to be built and thence south to the Cape of Good Hope by the projected "Cape to Cairo" route, or on a road that may sometime be constructed along the west coast.

At the foot of the Rock of Gibraltar a town of about thirty thousand people, including Spaniards, Greeks, Italians, Africans, and English, has grown up to supply the trade moving back and forth through the channel. It has many good stores where English is spoken and where we

can buy lace and curios of various kinds. The houses look Spanish. The harbor on which the town faces has about five hundred acres of deep water, and the place is a coaling point and an important naval station.

As we step from the steamer we are met by British officers, and as we stroll through the town are delighted to find that so many of the people speak English. The money is English, and we find books, magazines, and newspapers in our own language on sale.

We visit the governor, who is appointed by the British king and who is also commander of the fort, and from him learn that the British keep several thousand soldiers here all the year round.

We ask as to the history of Gibraltar, and learn that in olden times it formed the site of one of the Pillars of Hercules, the other being in the town of Ceuta (sū'tā) in Africa on the other side of the strait. These two pillars were monuments crowned by silver columns erected by the Phœnician mariners to mark the limits of navigation. They seemed to be at the end of the world, and for a long time no vessel dared to pass through into the vast, unknown ocean beyond.

Gibraltar once belonged to Spain, but was taken again and again by the Moors. It belonged to them for about thirty years before the discovery of America, and in A.D. 1502 it was again annexed to Spain. Since then it has been fought over again and again in European wars, and during the eighteenth century was finally taken by Great Britain, to which country it has since belonged.

Gibraltar is connected with the mainland of Spain by an isthmus so narrow that we can easily throw a stone from one side to the other. It is a free port and where the isthmus joins the mainland it is guarded by Spanish soldiers for the

prevention of smuggling. When we take a walk across into Spain, we are asked if we have any tobacco; and the soldiers tell us that their greatest trouble is in watching the dogs of the smugglers, which are taken by their masters into Gibraltar, where packages of dutiable goods are tied to their backs. They are then turned loose and run homeward to Spain. They are taught to fear the customs officers by being whipped again and again by men who wear the same uniform, so that it is almost impossible for the soldiers to catch them.

LXVIII. PORTUGAL

HOW our hearts jump as we go to the shipping office near the wharves of Gibraltar and take passage for London! Our long tour is now about over, and we shall soon be crossing the Atlantic for our own dear America. We have already traveled through every country in Europe except the little republic of Portugal, and of this we shall see something while our steamer stops to take on cargo at Lisbon and Oporto on its way north.

Portugal is like Spain in that it is generally mountainous, but it also has many rich plains. It is about three times the size of Belgium or Holland and almost as large as Indiana. The country is noted for its fine fruit, its great vineyards, and forests of the oak whose bark furnishes the cork of commerce. It raises many cattle and sheep, and thousands of hogs are fed on the acorns that grow in the woods. Much wheat, corn, barley, and rye are raised in the valleys, although not enough to feed all the people.

Portugal is a land of flowers, and roses bloom all the year round. The breezes from the mountains and ocean make it cooler in summer and warmer in winter than Spain, so that the climate is delightful.

Portugal has several good harbors, and as most of its people live near the coast, they are a great seafaring nation. In



Our route through Spain and Portugal

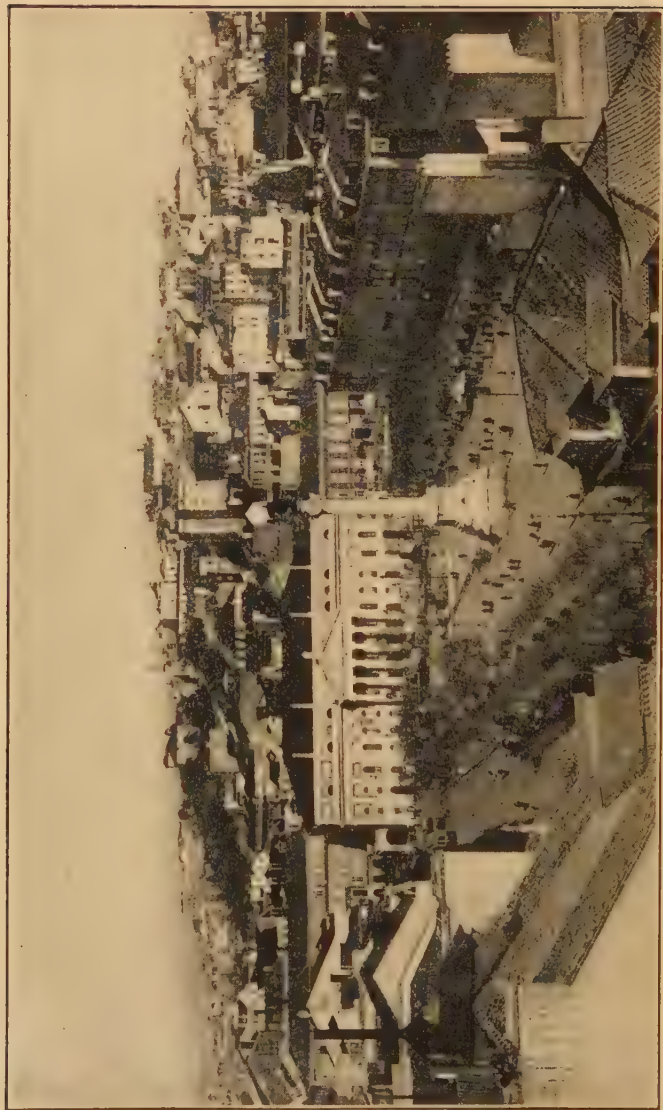
the Middle Ages their ships sailed to England and all parts of the Mediterranean. They were the first to explore the west coast of Africa, and Bartholomew Diaz (dē'ās), a Portuguese sea captain, was the first white man to reach the Cape of Good Hope. That was five years before Columbus discovered America; and then years later, Vasco da Gama

(gä'mä), another Portuguese, made the first voyage around Africa to India. Most of the eastern coast of South America was discovered by Portuguese, and it was a Portuguese explorer, Ferdinand Magellan, who passed through the Strait at the southern end of the continent, crossed the Pacific, and discovered the Philippine Islands, where he was killed. One of Magellan's ships sailed on around the Cape of Good Hope to Europe, and thus made the first voyage clear around the world.

At that time the Portuguese went everywhere, establishing colonies in South America, India, and other places, so that to-day more people speak Portuguese outside Portugal than in that country itself. Brazil is eighty times as large as Portugal, inhabited by almost three times as many Portuguese-speaking people. Rio de Janeiro is the world's largest Portuguese city.

It is but a short voyage from Gibraltar to Lisbon, and we are soon steaming in through the mouth of the Tagus River and up to the city, which is twelve miles from the coast. The river widens within a short distance from its mouth, and is so broad and deep in front of the city that it forms an excellent harbor, which is visited by vessels from all parts of the world. We sail through shipping all the way up the river. The banks are high and steep, and massive buildings painted in the brightest of colors may be seen through the trees. There are castles and churches on the tops of the hills, and beyond them are the ragged Cintra (sên'trä) Mountains, their peaks in the sky.

Lisbon, and its suburbs, with a population of almost half a million, border the Tagus for more than nine miles, the buildings extending for three miles back from the river, and it looks quite imposing as we steam up to the wharves. Landing, we stroll about through the streets.



View of Lisbon with the chief square and opera house in the foreground

Some of them are wider than the avenues of our American cities. They are lined with trees, and have excellent pavements. The buildings are large two and three story structures of gray stone, or of brick covered with stucco; many of them are painted in the most delicate tints of red, blue, and yellow.

The people are as gay as their homes. They are well dressed. Many of the men wear suits of white linen with hats of white straw, and the women dress in brighter colors than the women of Spain. The Portuguese are somewhat like the Spaniards, but not so heavily built; their hair and faces are darker, and they are on the average shorter in stature. We occasionally see a negro among them, for the Portuguese were slave traders in the past. They took cargoes of negroes from Africa to Brazil, and also brought slaves to Portugal.

How many queer characters there are on the street! We meet peddlers going about with boxes and baskets on their heads, crying their wares; men upon horseback and ladies in carriages and automobiles; scores of donkeys, some ridden by men, and others driven along loaded with bags, baskets, and even with stones. We see many priests and nuns, and churches and monasteries in all the towns.

We pass fountains at every few steps; there are more than thirty in Lisbon, all fed by a great aqueduct which brings water from the hills eight miles away. Each fountain is surrounded by men, women, and children who are filling stone jars and casks and carrying them off on their heads to their homes. Many of the water-carriers are Spaniards from the province of Galicia, who have hired themselves out as servants to the Portuguese.

After our walk we visit the library of Lisbon, which con-

tains three hundred thousand volumes, and then spend some time in the government offices. Portugal is a republic, having a president and a congress elected by the people. The country has large dependencies in Africa. The province



Portuguese school children

of Mozambique, or Portuguese East Africa, on the east side of that continent, is ten times as large as the state of Virginia, and Angola, or Portuguese West Africa, on the

west side, is almost ten times as large as New York. Portuguese Guinea is larger than Maryland. In addition there are Portuguese colonies in Asia such as the island of Macao near Canton, China, and Goa in India, so that the Portuguese dependencies all together are more than twenty-seven times as large as Portugal itself.

The Portuguese are backward in the adoption of modern improvements. Although the law is that all children shall go to school, only about one third of the people can read and write. Their farming is primitive, and although they have water power, coal, copper, and iron, these resources are but little developed. They take large quantities of salt from the sea, the Portuguese sea salt being regarded the best of all Europe. They have cotton, silk, and linen mills, and the cotton goods, consisting largely of gay colored calicoes made from the raw cotton of our southern states, are shipped largely to their colonies in Africa. The chief cotton factories are at Lisbon and Oporto.

During our stay at Lisbon we take a trip through the rich valley of the Tagus. This river rises in Spain, and after leaving the mountains, flows through plains of great fertility down to the sea, dividing Portugal into two almost equal parts. There are windmills on all sides of us as we ride up the valley; we pass bullock carts dragging great loads over the highways, and donkeys and mules jogging along with brushwood, timber, and bags of grain on their backs. There are women and men at work in the fields. We stop to lunch in an orange grove, picking the ripe juicy fruit from the trees, and as we near the mountains we pass by many large vineyards.

We are especially interested in the cork trees, from whose bark come the stoppers used in bottles all over the world. There are hundreds of thousands of acres of such trees in

Portugal and Spain. The cork tree is an evergreen oak which, when full grown, is forty or fifty feet high and sometimes as much as five feet in diameter, having a thick gray bark. Corks are made from the bark, which is soft. The bark grows slowly; a tree must be fifteen years old before its bark becomes an inch or so thick and ready for cutting.



After this the tree will grow a new coat every eight or ten years for more than a century.

In taking off the bark, two rings are cut around the tree, one just above the ground, and one below the main branches. Between these, cuts are made lengthwise just deep enough not to injure the innermost bark, and the strips are pried

off. After stripping, the bark is flattened out by heating it over a fire. It is scraped and cleaned and hardened after boiling or steaming, when it is ready to be shipped to the markets.

The bark is used for making bottle stoppers, linoleum, cork legs, hat linings, the soles of shoes, life preservers, bicycle handles and many other things. It is so valuable that it brings in more than three million dollars a year, being next to wine the chief export of the country. Some cork comes also from Spain, seven tenths of the world's supply being from the Iberian Peninsula. We find men loading cork on our steamer when we get back to Lisbon, and as we sail out of the harbor towards the stormy Atlantic we rejoice in the fact that we have so much cork on board, that if our ship should be wrecked, we could not possibly sink.

We stay only a short time in Oporto to take on a cargo of wine for Great Britain, and then steam on to London, a distance of about one thousand miles. Here we remain a few days to repack our baggage and complete our list of presents for our dear friends at home. We next send cables to tell them we are leaving, and having finished our long tour of Europe, take a train for Liverpool, where one of the fastest of the ocean greyhounds is waiting to carry us back to New York.

Make a sketch map of the Iberian Peninsula, showing cities and harbors mentioned in the text. What part of it belongs to Portugal? To Spain? Compare it in size and surface with Scandinavia; with Italy. What wall of mountains is at the north? What strait at the south?

What American state is nearest Spain in size? Which nearest Portugal? Which country has the most colonies? Locate the most important ones and outline a route to each by sea.

What are the chief products of Spain? How is olive oil made? How does Spain rank among the grape-growing countries of Europe? Among the olive-growing countries? What famous breed of sheep comes from there? In what part of the United States are olives raised? (See Carpenter's "North America.")

Compare Spanish farming with that of the United States.

Locate six important cities and tell for what each is noted. Where is Palos, and what part had it in the discovery of America? Where was Columbus born? Where did he die?

Where is Gibraltar? Show why it is important for Great Britain to hold it. How long is the Strait? How wide? How deep? Suppose railway tunnels were made at Gibraltar and at Dover, and make a trip from Glasgow to Tangier in Morocco. Outline possible railway routes from Paris to Cape Town in Africa.

What Mohammedan people conquered Spain? Why was it said that Africa began at the Pyrenees? In what part of Spain are the descendants of those people mostly found?

Who are the Basques? Where are they found?

Tell what you can about our war with Spain. Give the results of that war with regard to Cuba; Porto Rico; the Philippine Islands.

How far is Gibraltar from New Orleans? From San Francisco? Through what two great straits does a ship go from New York to the Philippines, traveling eastward? Through what canal? Describe the journey. What nation controls the canal and the straits?

Name an important product of the forests of Portugal. Describe the tree from which it comes and some of its uses.

How is Portugal governed? Visit Lisbon and tell what you see. Trace our voyage from Gibraltar to London, and our route back to New York. About how far do we travel?

TABLES

TABLE I. AREA AND POPULATION OF CONTINENTS

	Sq. Mi.	Pop.
Asia	17,150,000	1,038,415,000
Africa	11,631,000	140,841,000
North America	9,439,000	162,981,000
South America	7,043,000	78,377,000
Europe	3,785,000	466,331,000
Australia, etc.	3,462,000	8,604,000
Antarctic Continentl	5,000,000	
TOTAL	57,510,000	1,895,549,000

TABLE II. AREA OF EUROPEAN COUNTRIES

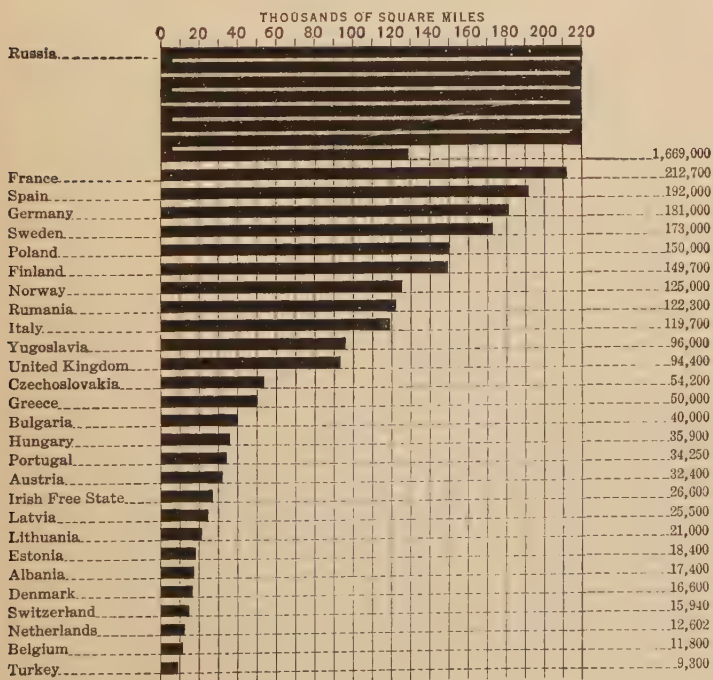


TABLE III. AREA OF OCEANS

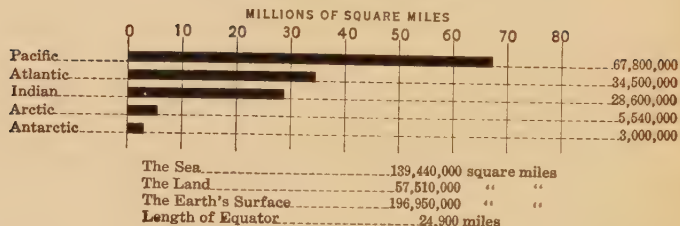


TABLE IV. POPULATION OF EUROPEAN COUNTRIES.

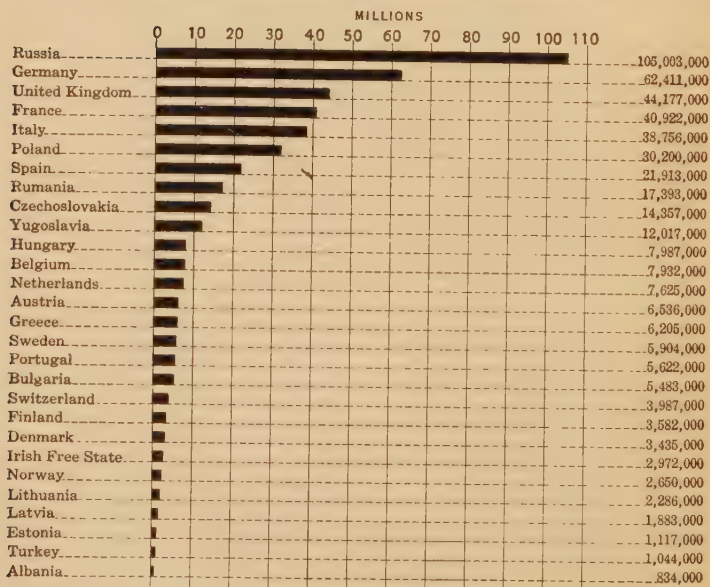


TABLE V. CHIEF EUROPEAN CITIES

	POP.		POP.
<i>Austria</i>		Bremen	295,000
Vienna	1,866,000	Magdeburg	294,000
<i>Belgium</i>		Königsberg	280,000
Brussels	826,000	Duisburg	273,000
Antwerp	300,000	Stettin	254,000
Liège	169,000	Mannheim	247,000
<i>Bulgaria</i>		Kiel	214,000
Sofia	213,000	<i>Greece</i>	
<i>Czechoslovakia</i>		Athens	453,000
Prague	677,000	Salonica	237,000
<i>Danzig</i>		<i>Holland</i>	
Danzig	390,000	Amsterdam	743,000
<i>Denmark</i>		Rotterdam	578,000
Copenhagen	587,000	Hague	425,000
<i>Estonia</i>		<i>Hungary</i>	
Reval	132,000	Budapest	978,000
<i>Finland</i>		<i>Irish Free State</i>	
Helsingfors	227,000	Dublin	419,000
<i>France</i>		<i>Italy</i>	
Paris	2,871,000	Naples	966,000
Marseille	652,000	Milan	962,000
Lyon	571,000	Rome	915,000
Bordeaux	256,000	Genoa	623,000
Lille	202,000	Turin	591,000
St. Etienne	194,000	Palermo	447,000
Nantes	185,000	Florence	317,000
Nice	184,000	Catania	282,000
Toulouse	181,000	Venice	258,000
Strasbourg	174,000	Trieste	255,000
Havre	158,000	Bologna	245,000
Rouen	123,000	Messina	204,000
<i>Germany</i>		Fiume	49,000
Berlin	4,024,000	<i>Latvia</i>	
Hamburg	1,079,000	Riga	340,000
Cologne	700,000	<i>Lithuania</i>	
Munich	681,000	Kovno	97,000
Leipzig	679,000	<i>Norway</i>	
Dresden	619,000	Oslo	251,000
Breslau	557,000	Bergen	96,000
Essen	471,000	<i>Poland</i>	
Frankfurt-am-Main	468,000	Warsaw	937,000
Düsseldorf	433,000	Lodz	452,000
Hanover	423,000	Lemberg	219,000
Nuremberg	392,000	<i>Portugal</i>	
Stuttgart	342,000	Lisbon	530,000
Chemnitz	332,000	Oporto	216,000
Dortmund	322,000	<i>Rumania</i>	
		Bucharest	875,000

TABLE VII. DISTANCES BETWEEN PORTS OF UNITED STATES AND EUROPE

FROM	TO NEW YORK	TO NEW ORLEANS	TO SAN FRANCISCO
Amsterdam	3,410	4,892	
Antwerp	3,325	4,853	
via New York			6,516
via Panama			8,264
Athens			
via London	5,655		
Bordeaux	3,216	4,785	
via Panama			7,886
Brest, France	2,954	4,458	
via New York			6,145
via Panama			7,840
Christiania	3,601		
Constantinople	5,026	6,412	
Copenhagen—direct	3,852	5,443	
via New York			7,043
Fiume	4,848		
Gibraltar	3,207	4,576	
via New York			6,398
via Panama			7,642
Glasgow	3,370	4,510	
Genoa	4,054	5,440	
Hamburg	3,652	5,243	
via New York			6,843
Havre	3,169	4,760	
via New York			6,360
Liverpool	3,053	4,553	
via New York			6,244
via Panama			8,038
London	3,233	4,507	
via New York			6,424
via Panama			8,218
Marseille	3,876	5,266	
via New York			7,067
via Panama			8,332
Naples	4,172	5,562	
via New York			7,363
Petrograd—direct	4,632	6,223	
via New York			7,823
Queenstown	2,876	4,455	
Rotterdam	3,035	4,893	

NOTE: In calculating time of travel, allow thirty miles an hour for distance by railroad, and fifteen miles an hour for distance by steamer.

TABLE VIII. IMPORTANT RIVERS OF EUROPE AND THEIR COMPARISON WITH RIVERS OF THE UNITED STATES

EUROPE	MILES LONG	UNITED STATES	MILES LONG
Danube	1700	Rio Grande	1800
Dnieper	1060	Platte	1260
Dniester	800	White River, Arkansas	800
Don	980	Ohio	950
Dvina	1000	Yellowstone	1100
Ebro	470	James	450
Elbe	610	Sacramento	600
Garonne-Gironde	340	Hudson	350
Kama	980	Snake	950
Loire	540	Susquehanna	506
Marne	210	Shenandoah	200
Meuse	530	Susquehanna	506
Moselle	300	Allegheny	350
Oder	420	Big Horn	500
Oka	710	Red River	700
Po	350	Hudson	350
Rhine	710	Red River	700
Rhone	450	James	450
Saône	270	Kentucky	250
Seine	430	Potomac	450
Shannon	250	Roanoke	240
Thames	215	Shenandoah	200
Ural	1450	Columbia	1400
Vistula	600	Cumberland	650
Volga	2300	Arkansas	2000
Weser	300	Monongahela	300

TABLE IX. WATER POWERS OF THE WORLD

	AVAILABLE H. P.	DEVELOPED H. P.
United States	55,000,000	4,100,000
Norway	7,500,000	920,000
Sweden	6,750,000	550,000
France	5,857,000	650,000
Italy	5,500,000	565,000
Spain	5,000,000	300,000
Finland	3,000,000	
Switzerland	1,500,000	380,000
Germany	1,425,000	445,000
Great Britain	963,000	80,000

TABLE X. THE FORESTS OF EUROPE

	ACRES
Czechoslovakia.	2,000,000
Great Britain	3,000,000
Finland	38,000,000
France	24,000,000
Germany	35,000,000
Hungary	2,000,000
Italy	10,000,000
Yugoslavia ($\frac{1}{2}$ total area)	32,000,000
Norway	17,000,000
Poland	46,400,000
Russia	480,000,000
Spain	21,000,000
Sweden	49,000,000

NOTE: Forest area of United States is 550 million acres and that of Canada is officially estimated at between 500 and 600 million acres.

TABLE XI. THE RAILROADS OF EUROPE

	MILES
Austria (1915)	14,747
Belgium.	5,451
Bulgaria	1,824
Czechoslovakia	3,680
Denmark	2,556
Finland	2,527
France	31,958
Germany	39,600
Greece	1,396
Hungary	6,812
Italy	11,891
Yugoslavia	3,390
Netherlands	2,113
Norway	1,979
Poland	8,000
Portugal	1,854
Rumania	2,382
Russia	48,955
Spain	9,354
Sweden	9,303
Switzerland.	3,660
United Kingdom	23,734

NOTE: The length of the railways of the United States is about 270,000 miles.

TABLE XII. PRINCIPAL COUNTRIES MANUFACTURING COTTON

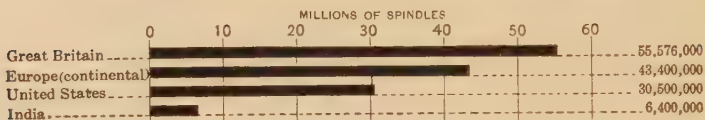


TABLE XIII. HIGH MOUNTAINS OF THE WORLD

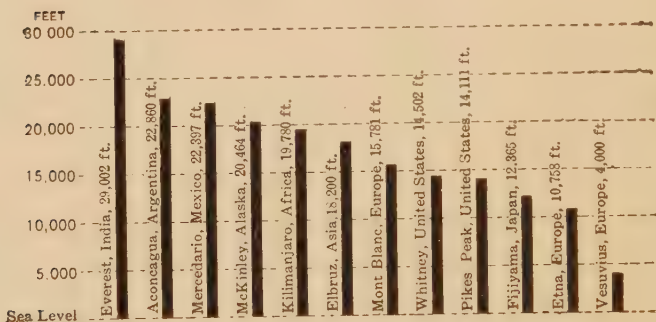


TABLE XIV. PRINCIPAL COUNTRIES PRODUCING RAW SILK

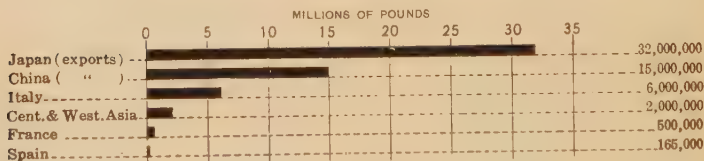
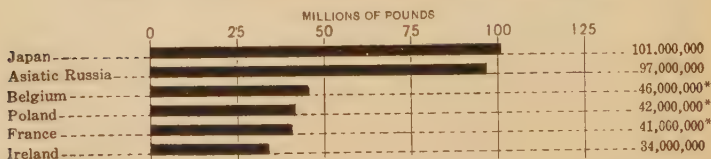


TABLE XV. PRINCIPAL COUNTRIES PRODUCING FLAX FIBER



* Production before the World War

TABLE XVI. PRINCIPAL COUNTRIES PRODUCING FLAX SEED

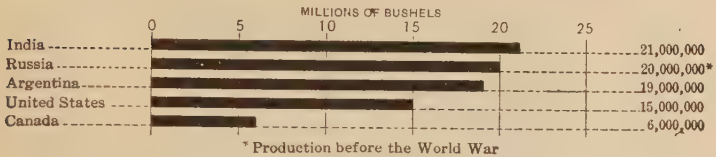


TABLE XVII. PRINCIPAL COUNTRIES PRODUCING RYE

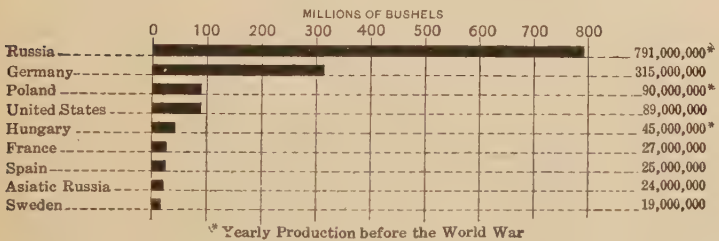


TABLE XVIII. PRINCIPAL COUNTRIES PRODUCING BEET SUGAR

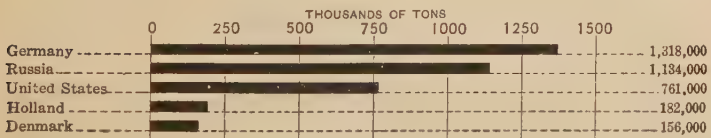


TABLE XIX. PRINCIPAL COUNTRIES PRODUCING CORN

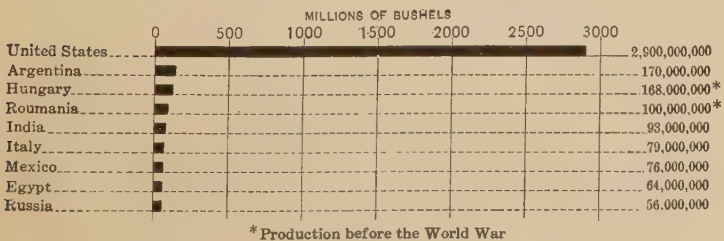


TABLE XX. PRINCIPAL COUNTRIES PRODUCING WHEAT

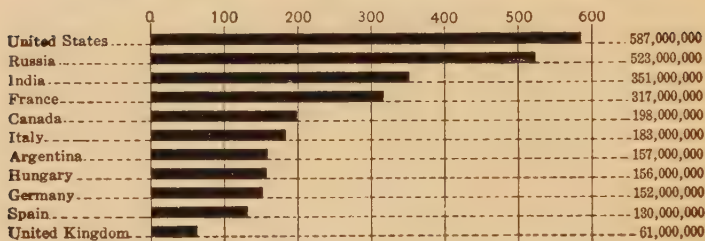


TABLE XXI. PRINCIPAL COUNTRIES RAISING CATTLE

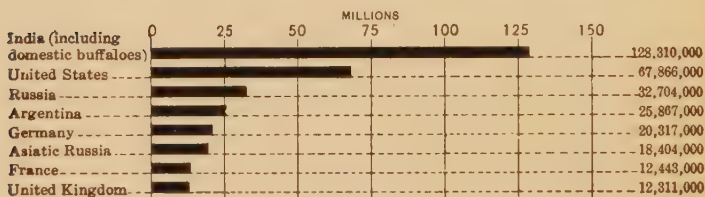


TABLE XXII. PRINCIPAL COUNTRIES RAISING SHEEP

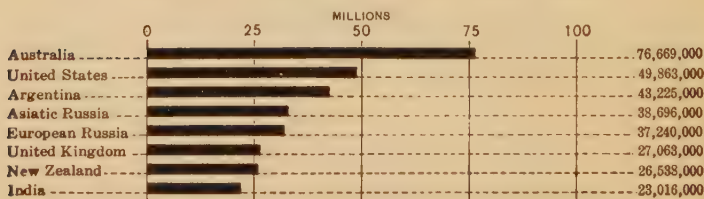


TABLE XXIII. PRINCIPAL COUNTRIES PRODUCING PETROLEUM

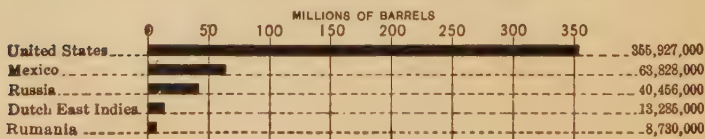


TABLE XXIV. PRINCIPAL COUNTRIES PRODUCING PLATINUM

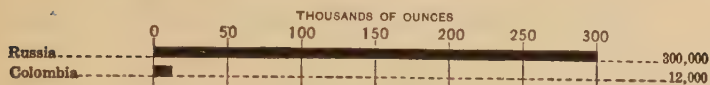


TABLE XXV. PRINCIPAL COUNTRIES PRODUCING IRON

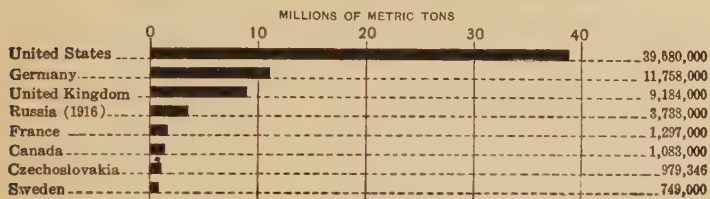


TABLE XXVI. PRINCIPAL COUNTRIES PRODUCING COAL

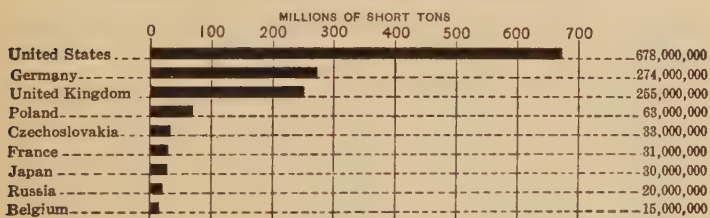


TABLE XXVII. PRINCIPAL COUNTRIES PRODUCING COPPER

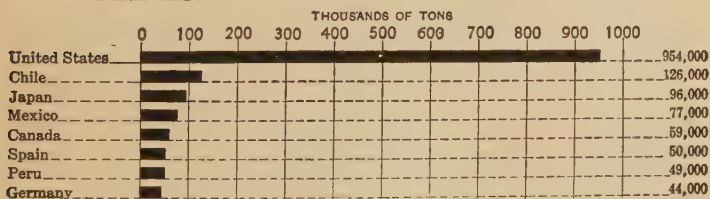
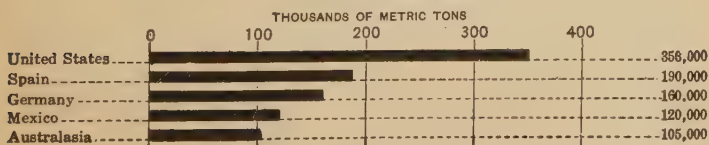


TABLE XXVIII. PRINCIPAL COUNTRIES PRODUCING LEAD



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